Drainage Maintenance Plan

2011

5th Edition

Table of **Contents**

1 Introduction Overview

1.1 Introduction

The City of Hampton is essentially a community with flat topography which is bounded by the Chesapeake Bay to our east, the Hampton Roads Harbor to our south, and the James River to the west. We are also bisected by smaller rivers and creeks which help give us our character as a "waterfront" community. Stormwater management is not simply a matter of convenience, but one of survival given our history of coastal storms, flooding rainfall events, and hurricanes.

Historically, Drainage Maintenance has had a low priority within the organization surfacing as an issue only when we have a heavy rainfall or major storm event. In a world of expanding stormwater responsibilities and shrinking available local tax dollars it is critical to plan the maintenance work of the division in order to optimize our return on the investment. In most instances the information needed to plan and implement a comprehensive Drainage Maintenance Plan was only available if you knew where to look, or who to ask.

1.2 Purpose

The purpose of this Drainage Maintenance Plan is to capture and formalize maintenance information that has historically been unwritten and existed in various locations. There were large amounts of data and expertise held within the memory of division managers and supervisors that needed to be gathered and organized in a manner that could be understood and implemented.

Additionally, it is the intent of this plan to capture the maintenance data and scheduling information that has simply been institutional knowledge for years which will leave the organization as senior staff retires. The plan was also developed to identify existing drainage infrastructure and develop an inventory which can be identified through GIS mapping.

1.3 Division Mission Statement

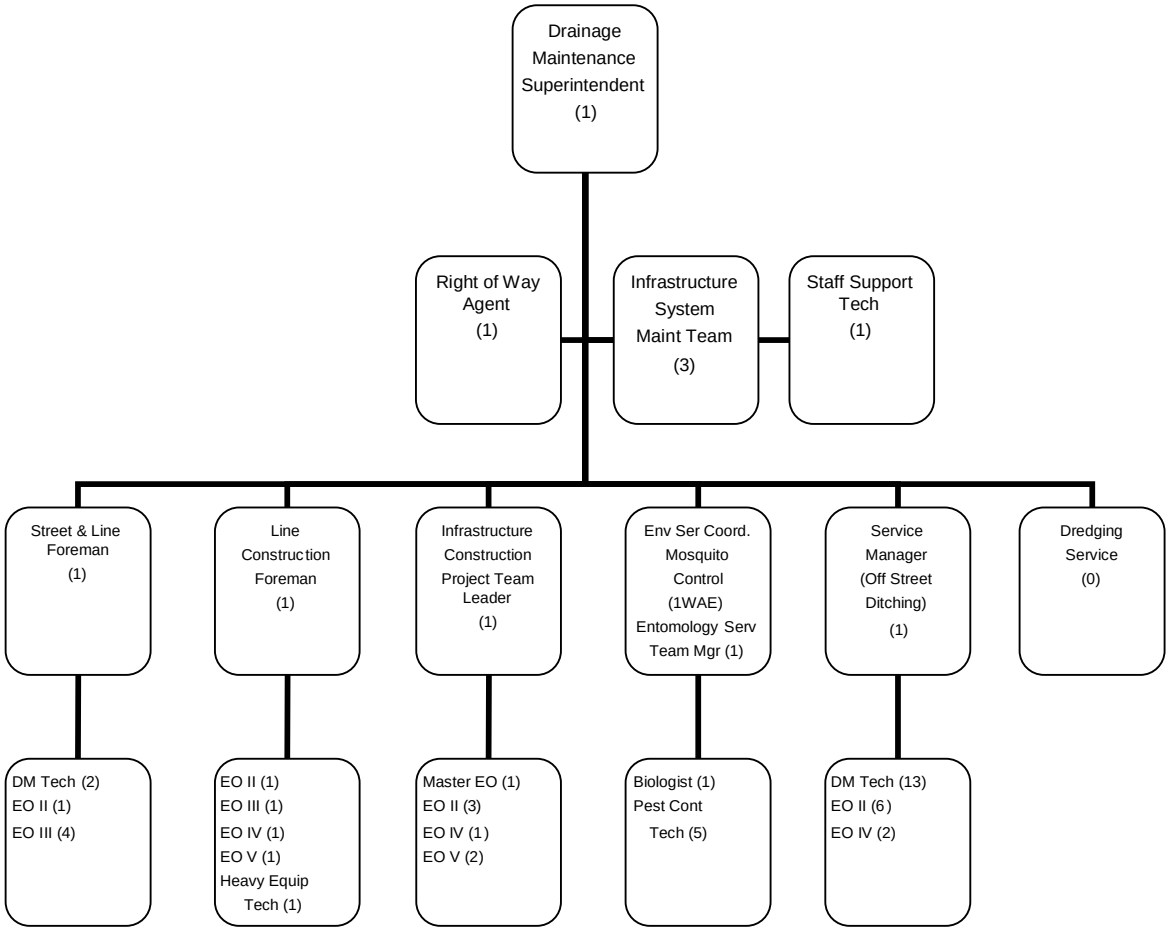
The mission of the Drainage Maintenance division is to proactively protect lives and property from flooding events and to perform ongoing maintenance and repair of the entire public drainage system. This mission is to be accomplished by providing quality services that add to our citizen's quality of life and make Hampton the most livable city in Virginia.

1.4 Goals and Objectives

- Reduce flooding calls for service to the least possible number
- Proactively maintain the public drainage system on a schedule to maximize its' effectiveness, reduce the overall maintenance cost, and reduce the number of repair calls for service
- Actively provide public education and information on drainage services and issues affecting the system
- Develop a GIS database of all drainage infrastructure
- Assist other city agencies with resources and expertise as requested

2 Current Operations

2.1 Organizational Chart



2.2 Current Manning Levels

Prior to the development of Stormwater Management fund, the Drainage Maintenance General Fund manning consisted of thirty (30) permanent full-time positions. This did not include Mosquito Control which was a separate division of Public Works at that time. At present, Drainage Maintenance manning consists of fifty-seven (57) permanent full time employees. This includes Mosquito Control that was placed back into Drainage Maintenance in 1998. Mosquito Control's placement added seven permanent full time positions to the Drainage Maintenance General Fund manning. Since 1998 several positions were switched from General Fund to Stormwater Fund. This included the Service Team Manager (Off Street Ditching) and the entire Heavy Equipment section. In 2007 (FY08) City Council approved one more back ditching crew and an outfall mechanized ditching crew to enhance ditch cleaning, bringing the total division staffing to fifty-seven (57) authorized positions from the General Fund and Stormwater Fund.

Stormwater positions:	
Service Team Manager	1
Stormline Construction Repair Foreman	1
Streetside Line Foreman	1
Equipment Operator V	2
Equipment Operator IV	2
Equipment Operator III	2
Equipment Operator II	6
DM Tech	11
Master Equipment Operator	1
Biologist	1
GIS Specialist	1
GIS Technician	1
Sr Engineering Aide	1
Infrastructure Construction Team Leader	1
Chemical Applicator	2
Total Full-Time Positions	**34**

General Fund positions:	
DM Superintendent	1
Staff Technician III	1
Entomology Service Team Mgr	1
Heavy Equipment Technician	1
Equipment Operator V	1
Equipment Operator IV	2
Equipment Operator III	3
Equipment Operator II	5
DM Tech	4
Chemical Applicator	3
Right-of-Way Agent	1
Total Full-Time Positions	**23**

2.3 Drainage Infrastructure Inventory

	As of July 30, 2011
Type	**Public**
Blind Tees	93
Endwalls	1227
Flared End Sections	447
Junction Boxes	48
Manholes	1788
Pipe Ends	1345
Roof Drains	155
Tide Valves	9
Wiers	8
Yard Drains	6106
Box culverts	111
Earth ditches	1837 (91.927 miles)
Paved ditches	1538 (75.989 miles)
Round Pipe	18806 (345.315 miles)
Elliptical Pipe	550 (11.352 miles)
Street ditches	120 miles (estimated)
Curb Drop Inlets	8604
BMPs	7
Half Pipe	40 (2.58 miles)
Clean Out	8
Filterra	6
Grate	13

Gutter Drain	15
Other	15
Saddle T	5
18” Brick Tunnel	1 (7.049 feet)

SOURCES:

- Gannett Fleming Study
- City of Hampton GIS Mapping

2.4 Division Equipment Inventory

GENERAL FUND ◆ EQUIPMENT INVENTORY — As of July 2011

VEHICLE	YEAR	MAKE	MODEL	EQUIP TYPE
102	1999	INT	4700	TRK UTILITY, SERVICE TRUCK
104	1998	INT	4700	TRK UTILITY, SERVICE TRUCK
109	2000	NEW HOLLAND	TS100	SLOPE MOWER TRACTOR
110	1999	INT	4900	TRK, DITCHMASTER DITCH CLEANER
112	2004	FORD	F150	PICKUP
113	1999	FORD	F150	PICKUP
116	2001	CHEV	BLAZER	SPORT UTILITY VEHICLE
117	2002	FORD	F150	PICKUP
122	2004	FORD	F150	PICKUP
125	1996	CAT	315L	EXCAVATOR
126	1992	INT	4700	TRK DUMP MED
127	1996	INT	4700	KNUCKLEBOOM
128	2001	FORD	F350	PICKUP CC
129	2001	FORD	F350	PICKUP CC (David's old trk - do not deact yet - 5/7)
130	2001	FORD	F150	PICKUP CC
131	2001	GMC	1500	PICKUP SIERRA
132	2003	FREIGHTLINER	FL70	TRK DUMP W/GODWIN BODY
142	1995	INT	4700	TRK DUMP MED
148	1995	CHEV	C1500	PICKUP
149	1996	INT	4700	TRK DUMP MED
151	1995	INT	4700	TRK DUMP MED
159	2004	NEW HOLLAND	TS100	SLOPE MOWER
160	1995	INT	4700	TRK DUMP MED
162	1996	INT	2554	TRK DUMP TANDEM
163	1996	INT	2554	TRK DUMP TANDEM
164	1996	INT	2554	TRK DUMP TANDEM
174	1992	GRADALL	G660E	EXCAVATOR
180	1984	CAT	D7G	DOZER, LARGE
186	1987	CAT	1225BZ	EXCAVATOR
188	2004	CAT	325CL	EXCAVATOR, CRAWLER
190	1989	MACK	R688ST	TRACTOR TRAILER HIGHWAY

GENERAL FUND ◆ EQUIPMENT INVENTORY

As of July 2011

VEHICLE	YEAR	MAKE	MODEL	EQUIP TYPE
1100	2006	FORD	F150	PICKUP
1101	2006	FORD	F150	PICKUP
1102	2006	CHEV	2500	PICKUP CC
1104	2006	CHEV	2500	PICKUP CC
1105	2005	JOHN DEERE	310SG	BACKHOE, LOADER 4X4
1108	2007	JOHN DEERE	35D	EXCAVATOR, MINI
1109	2007	GMC	2500	PICKUP ¾ TON, SIERRA
1111	2007	GLOBE	GTBN50-50	TRAILER, LOW BOY 50-TON TRI-AXLE
1112	2007	JOHN DEERE	550J LGP	DOZER, CRAWLER, LOW GROUND
1113	2007	GMC	2500HD 4X4	PICKUP SIERRA 4WD
1115	2007	CATERPILLAR	PAYLOADER	LOADER, HIGH LIFT WHEEL
1119	2008	INTER	TRACTOR	ROAD TRACTOR
1120	2008	FORD	F250	CREW CAB
1121	2008	Sterling	LT7500	TRK DUMP TANDEM
1130	2003	ARGO	CONQUEST	ATV
9103	2001	TRAKKER	TLR	TRAILER
9106	1988	GILL	SR20	BOXSCRAPER
9107	1988	YORK	MISC	RAKE
9111	1997	LEROI	MISC	COMPRESSOR
9114	1997	BUSH HOG	406R	MOWER
9115	1997	BUSH HOG	406R	MOWER
9116	1997	HAZELWOOD	TLR	TRAILER, FLAT BED, UTILITY
9118	1997	TRAIL KING	TLR	TRAILER, LOWBOY
9121	1998	LEROI	GEN	GENERATOR
9130	1995	TOW RITE	TLR	HYDRO-SEEDER TLR
9131	1986	INTERSTATE	TLR	TRAILER
9135	1990	FINN CORP	MISC	HYDRO-SEEDER
9157	2003	TEXAS BRAGG	TLR	TRAILER
	2012	BOB-CAT	T750	COMPACT TRACK LOADER
	2012	BOB-CAT	E32	COMPACT EXCAVATOR

STORMWATER FUND ◆ EQUIPMENT INVENTORY

As of July 2011

VEHICLE	YEAR	MAKE	MODEL	EQUIP TYPE
103	1995	CHEV	TAHOE	SPORT UTILITY VEHICLE
111	1999	INTER	4700	TRUCK DUMP MED
191	1995	INTER	4700	TRUCK DUMP MED
1103	2006	CHEV	2500	PICKUP
1106	2006	KUT-KWICK	SSM38-72D	SLOPE MOWER
1110	2007	TEXAS BRAGG	TLR	TRAILER, FLAT BED
1114	2007	CHEV	2500 HD	PICKUP SIERRA CC
1116	2007	MENZI-MUCK	A61	EXCAVATOR, DITCH WALKER
1117	2007	GMC	6500	TRUCK, DUMP, SMALL SINGLE AXLE
1118	2007	CHEV	COLORADO	PICKUP, EXT CAB (SMALL)
1122	2008	STERLING	LT7500	TRK DUMP TANDEM

GENERAL FUND ◆ EQUIPMENT INVENTORY				As of July 2011
VEHICLE	YEAR	MAKE	MODEL	EQUIP TYPE
1123	2007	FORD	F250	CREW CAP
1124	2007	FORD	F250	CREW CAP
1125	2008	FORD	F250	CREWCAP
1126	2008	INTER	4300	M7 UT VEHICLE
1127	2008	CATEPILLAR	312CL	EXCAVATOR
1128	2008	STERLING	LT7500	TRUCK DUMP TANDEM
1251	2007	INTER	7400	WASH TRK W/VACTOR MOUNTED SEWER CLNR
1252	2007	INTER	7400	WASH TRK W/VACTOR MOUNTED SEWER CLNR
9100	1995	STOW	CM9H	TRUCK CEMENT MIXER
9108	1995	SULLAIR	MISC	AIR COMPRESSOR
9112	1997	HAZELWOOD	UTILITY	TRAILER

2.5 Description of Division Service Levels

STREETSIDE DITCHING CREW – All streetside ditches will be inspected once a year to determine if maintenance is required. Ditches that need maintenance (debris removal, grading, or brush removal) will be cleaned once a year or on a rotating schedule. One crew takes care of all the streetside ditches and hand clean ditches if grading is not necessary. Ditches are mechanically cleaned if re-grading is needed. Mechanical re-grading is done by both a ditchmaster for shallow ditches and a gradall (excavator) for wider and deeper ditches.

CONSTRUCTION CREW – Repairs existing drainage infrastructure and installs new infrastructure throughout the City of Hampton. This includes repairs of cave-ins over storm pipes and structures, such as, curb drop inlets, yard drains, and manholes. Existing deteriorated stormpipe is replaced by this crew as needed.

GRADALL – CONSTRUCTION CREW

OFF-STREET DITCHING CREW – All off-street ditches that receive public street water will be cleaned twice a year if needed. This includes outfall ditches, and residential back and side yard ditches that receive public street water run-off. This activity includes mowing slopes and access roads on large outfall ditches with three slope mowers during the growing season. Residential off-street ditches that do not receive street-water are the responsibility of the property owners; however we will unstop yard drains and pipe ends if requested at the end of the drainage system.

OFF-STREET MECHANIZED DITCHING CREW – All outfall ditches that receive street water run off will be inspected once a year for stoppages and other problems such as needs for re-grading to proper flow lines. Ditches will be scheduled for cleaning by prioritizing issues such as flooding problems. Ditches that are tidal, or in areas considered non-tidal wetlands that need to be re-graded, repaired, or require bank stabilization are placed on a schedule after all permits are acquired from the Stormwater Engineer. After any major storm event or wind event the larger outfall ditches will be inspected for downed trees that may cause blockages.

HEAVY EQUIPMENT CREW – Constructs new drainage infrastructure and replaces existing drainage infrastructure such as stormpipe, structures, retention and detention ponds citywide. This crew also clears land and assists other City departments as needed when major Heavy Equipment activities are needed. The work schedule is determined by inspections of the systems by existing staff, in-house projects by engineering staff, and other storm infrastructure projects by City staff that is determined too costly to contract out. This crew also assists in removing large blockages from outfall ditches after storm events and also re-grades outfall ditches between projects.

EXCAVATOR—HEAVY EQUIPMENT CREW

WASH TRUCK OPERATIONS – All curb drop inlets, manholes, and yard drains that are accessible are inspected and cleaned at least once a year if needed. While inspecting structures,

crews will also inspect stormpipe to determine if they need to be washed out due to excessive silt. The crews wash these pipes unless they require extensive cleaning, then they are placed on a work schedule.

SALT POND CHANNEL INSPECTION AND MAINTENANCE --The Drainage Maintenance Division is responsible to see that the markers that identify the Salt Pond Channel are maintained and are in good working order. There are eight Day Boards, red or green channel markers, they are responsible for along with one light which marks the entrance to the channel from the Hampton Roads Harbor. Initially, drainage personnel were making these inspections and attempting to make any necessary repairs found during inspections.

Currently, inspections are made twice a year by a private company under contract with the division and cost approximately $1,000.00 per inspection. If during the inspection any markers are found to need repairs they are scheduled by the contractor following approval from the division. Costs for necessary repairs are calculated on a time and materials basis.

If during the year a Day Board or the marker light is damaged during a storm event or from an accident, the contractor provides as needed repair services to the division to keep the channel markers operational. The cost of these repairs is again billed on a time and materials basis to the division.

2.6 Budget Information

The following chart provides historical detail of the drainage maintenance budget over the past four years and includes the approved budget for FY 2012. The budget is divided into two separate funds, one being the Drainage Maintenance General Fund and the other the Stormwater Management Fund. Revenue for the Stormwater Management Fund is generated through the Stormwater Fee approved by City Council in 1994. This fee is billed to all properties in the city as a portion of their real estate property tax bill.

Drainage Maintenance Budget

FY	General Fund Drainage	Stormwater Management Fund	Total Budget	% +/-
2007	$1,658,724.00	$1,243,909.00	$2,902,633.00	5% +
2008*	$1,817,742.00	$2,276,687.00	$4,094,429.00	29% +
2009	$1,671,760.00	$1,943,479.00	$3,615,239.00	9% -
2010	$1,480,224.00	$1,887,433.00	$3,367,657.00	9% -
2011	$1,494,030.00	$2,200,017.00	$3,694,047.00	11%+
2012	$1,407,103.00	$1,983,045.00	$3,390,148.00	10% -

*FY 2008 budget numbers reflect large increase due to proposed equipment purchases and establishing additional drainage maintenance crews

All numbers are the Council approved budget figures from departmental records

3 Annual Operations Maintenance Plan

3.1 Outfall Ditches

There are approximately 80 ditches in the drainage system that is considered outfall ditches that carry public street water to the bay and rivers (see **Appendix B – Map 3.1.1 Outfall Ditch Inventory)**. Drainage crews clean these ditches at least twice a year with the assistance of the slope mower. There are four (4) hand-cleaning crews in the division and the city is divided into three geographical areas to identify which ditches each crew is responsible for. The "extra" cleaning crew floats throughout the entire city assisting the other crews as necessary and helps with special projects as needed. These crews' average four members per team and are assigned a dump-bed crew cab pickup truck, weed-eaters and hand tools as necessary, and a single axle dump truck.

During the growing season outfall ditches that carry street water are cut twice per year with the priority being placed on the large outfall ditches as they carry the greatest volume of water. During the non-growing season all other outfall ditches that take street water are cut as needed. Throughout the year each cleaning crew is responsible for inspecting their ditches to check for blockages, obstructions of any kind, looking for trees that are down in the ditch, and then take the necessary actions to correct the problem.

Additionally, a mechanical cleaning crew has been formed within the division whose responsibility it is to re-grade the outfall ditches on a five to seven year cycle. This is done in order to maintain the proper flow in the ditch or is done as required following inspection by division personnel. This process may take longer for some of the outfall ditches as they are tidal ditches and require permits from the state to maintain. Delays in obtaining these required permits will affect the cleaning schedule for these particular outfall ditches.

The following map identifies the four major watershed basins in the city. Also included is a list of individual outfall ditches, creeks, and canals contained within each major watershed basin.

OUTFALL DITCH

OUTFALL INVENTORY BY DRAINAGE BASIN

[Numbers represent location as shown on Appendix B – Map 3.1.1]

Back River Drainage Basin

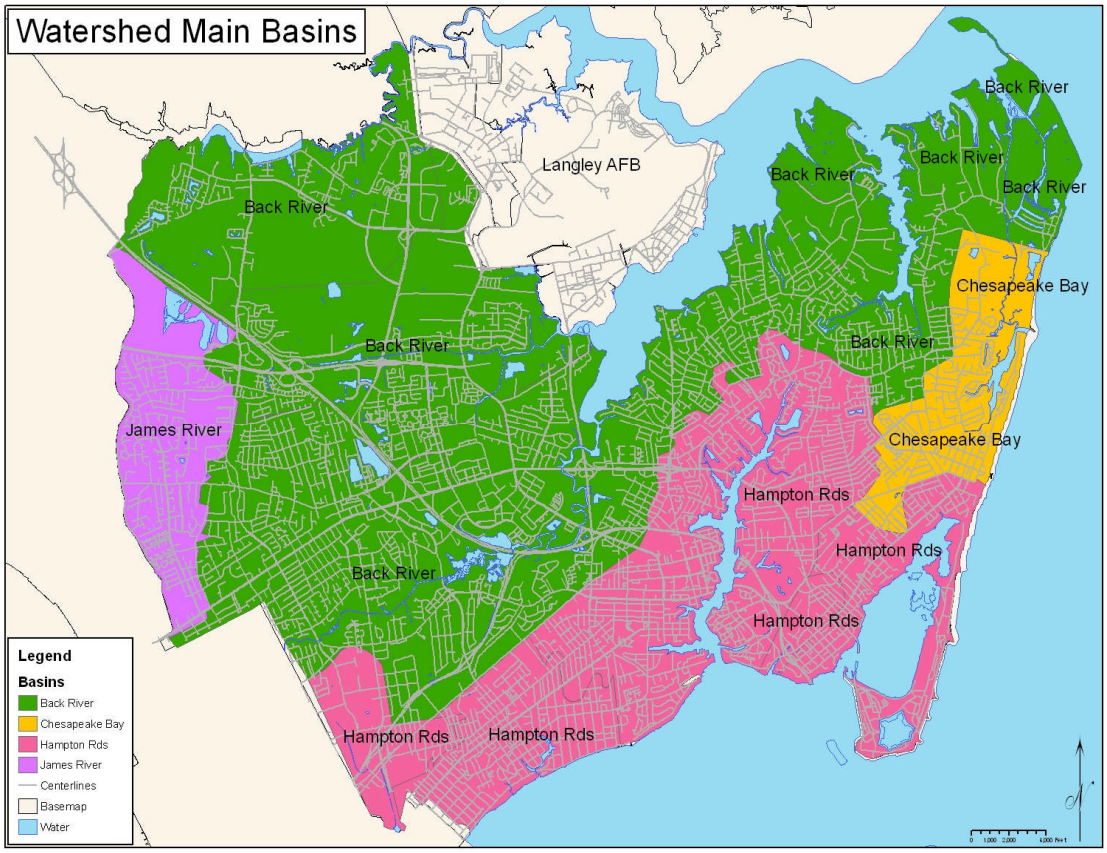
19	Aircraft approach zone outfall ditch
8	Bethel Reservoir
13	Billy Woods Canal and related outfall ditches
47	Bloxom's Corner Canal
25	Central Baptist Church Canal
42	Clemwood Parkway outfall ditch
31	Easterly Avenue outfall ditch
45	Fort Worth Canal
45	Fox Hill outfall ditch
36	Foxbridge outfall ditch
15	Golf Course and Hampton Roads Ctr North outfall ditches
26	Greenwood Farms Canal
53	Grundland Creek
12	Hampton Roads Center South outfall ditch
16	Hampton Woods Canal
35	Harris Creek
41	Harris Creek Road outfall ditch
34	Holiday Park Canals
52	Long Creek
43	Margaret Drive Canal
18	Nettles Lane outfall ditch
11	Newgate Village outfall ditch
79	Newmarket Creek
24	Northampton Canal
30	Old Northampton outfall ditch
33	Preston Street/Lexington Road outfall ditch
81	Queen Street/LaSalle Avenue Interceptor
9	Research Park/Magruder Bld outfall ditch
21	Riverdale outfall ditch
22	Riverside Apartment Canal
29	Roane Drive outfall ditch
48	Routten Road/Wallace Road outfall ditch
80	Salter's Creek Road outfall ditch
17	Sarah Hudgins Canal
10	Semple Farm Road outfall ditch
32	Southwest Back River
20	Tidemill Creek
28	Westminister outfall ditch
27	Whealton Heights Canal
54	White Pine Swamp
44	Willow Oaks/Gosnold's Hope Park outfall ditch
23	Winchester/Lakeshore Canal
14	Woods Lane outfall ditch
7	Wythe Creek

Hampton Roads Drainage Basin

66	Bright's Creek
61	Chamberlain Avenue outfall ditch
77	Cherry Acres Drive outfall ditches
76	Church Creek
75	Copeland Park Canal
40	Eastmoreland Drive Canal
38	Elizabeth Lakes outfall ditch
64	Fordham outfall ditch
56	Fox Hill Road/Bromley Rd outfall ditch
53	Hampton River
74	Indian Creek
73	Ivy Home Road outfall ditch
62	Jane Bryan School outfall ditch
67	John's Creek
69	Jones Creek
68	Lee Street outfall ditch
38	Malvern/Phillip's Lake outfall ditch
84	Mill Creek
65	Ridgeway Park outfall ditch
77	Robinson Creek
78	Salter's Creek
58	Second St/Point Comfort Ave outfall ditch
84	Shell Road outfall ditch
60	Shelton Road outfall ditch
70	Sunset Creek
71	Tomahawk Road outfall ditch
37	Upper Hampton River outfall ditch
59	Wilton Avenue outfall ditch
50	Womack Drive outfall ditch

Chesapeake Bay Drainage Basin	
51 Buckroe Beach outfall ditch Colonial	55 Salt Pond's Canal
46 Acres outfall ditch	57 Woodburn Drive/Lorigan Lane Canal
63 Newton Road Canal	49 Zinzer Road outfall ditch

James River Drainage Basin	
6 Farmington Canal	3 Orcutt Avenue outfall ditch
1 Government (Newmarket) outfall ditch	5 Todds Lane outfall ditch
2 Newmarket North Canal	4 Todds Lane/Hillsboro Drive Canal



3.2 Back and Side Ditches

The back and side ditches that carry street water in the drainage system are cleaned three times per year by the same crews that maintain the outfall ditches based upon the same geographical areas found in **Appendix B – Map 3.2.1**.

During the growing season these ditches are cut and cleaned twice per year and they are cleared of leaves one time per year. These same crews are also available for large scale clearing of leaves from the street-side ditches city-wide after all the leaves have fallen throughout the city. This particular cleaning of street-side ditches usually takes place in the January to March time frame.

Again, these crews average four (4) members per team and are assigned the same resources used to maintain the outfall ditch system. As with the outfall ditch cleaning process the additional crew is available to assist where necessary and take on any special projects as they arise.

3.3 Slopemower Ditches

Slopemowers assist in keeping larger ditches cut throughout the growing season.

Ditches Cut With Slopemower	
Womack Drive Ditch	502 Woodland Road Ditch
604 Buckroe Avenue Ditch	1620 Old Buckroe Road Ditch
Buckroe Shopping Ctr / E. Pembroke Ave.Ditch	Bryant Drive Ditch
Derry Road Ditch	Fordham (Ford Road) Ditch
Fort Worth Street Ditch	Garden of Howe Farms Ditch
E. Little Back River Rd. / Oakville Rd. Ditch	15 Fox Hill Road Ditch
100 Seldendale / Easterly Avenue Ditch	400 E. Mercury Blvd. Pond
Salina Drive / Roane Drive Ditch	Cherry Acres / King Street Ditch
Rip Rap Road / King Street Ditch	Gildner Road Ditch
Tide Mille Lane / Fox Run Ditch	NASA Drive Ditch
Cmndr. Sheppard Blvd. / Trailer Court Ditch	Research Drive Ditches (4)
Bellgrade Drive Ditch	Tysinger / Magruder Blvd. Canal
Hampton Memorial Cemetery Ditch	Billy Wood Canal / Butler Farm Road
Winchester Drive Ditch	Pennwood Drive Ditch
Pomoco Ditch / 4200 W. Mercury Blvd.	Northampton Ditch (Big Bethel to Lassiter Dr.)
Cunningham Dr. / Eaton School Canal	Pep Boys / 2200 W. Mercury / Lakeshore Ditch
1000 Big Bethel Rd. Ditch	Hillsboro Court Ditch
Baines Lane Ditch	Orcutt Ave. / Northampton Village Ditch
Govt.Ditch (W Merc. To Hpt. Rds. Ctr. Pkwy.)	Farmington Canal
Todds Ln. / Jefferson Davis School Ditch	3000 W. Mercury Blvd./ Arby's Ditch
1638 Briarfield Rd.Canal to I-664	Sam Rust Drive Ditches / Copeland Park
Aluminum Drive / Railroad Track Canal	Michigan Drive Ditch
LaSalle Avenue / Settlers Landing Road	Victoria Blvd. / V.F.W. Ditch
Kecoughtan Rd./W. Sunset Rd./Concrete	Shell Rd. Basin / Celey St
Fulton St. / W. County St. Ditch	500 Shell Rd @ Greenlawn Cemetery

3.4 Street-Side Ditches

The street-side ditching crew consists of five individuals who are responsible for inspection and cleaning of 52 miles of street-side ditches throughout the city. The equipment they have at their disposal includes a Ditch Master ditch-cleaning machine, a single axle dump truck, a crew cab dump pick-up truck, weed eaters, and hand tools as required to complete the job. Heavy equipment within the division is utilized when a particular job requires additional support to accomplish the street-side ditch cleaning process.

All street-side ditches are inspected once a year and mechanized ditch re-grading with the Ditch Master takes place as needed following these inspections. In the event the ditch simply needs cleaning, this is accomplished using hand tools and weed eaters. During either process all driveway pipes in the ditch are inspected and cleaned by hand or with the wash truck if the pipe is blocked and the water flow is restricted. This is done to insure the proper flow of any stormwater runoff as it passes through the driveway pipes that can become blocked with debris, trash, and soil.

Street-side ditches that are identified as “critical” by the Drainage Maintenance division are inspected and cleaned as necessary more than once a year. This determination is based upon the historical need for additional cleaning, the fact that the ditch is in a non-residential area, and the ditch has been identified by the division as a major ditch that drains a significant residential area. The following list of ditches is considered critical by the Drainage Maintenance division and need to be cleaned more than once a year.

CRITICAL DITCH LIST

- The street-side ditches along Briarfield Road on the west side of the city to the Newport News City line
- The street-side ditches that run along Old Buckroe Road from Woodland Road to Fox Hill Road
- The street-side ditches on Greenbriar Avenue between Victoria Boulevard and West Pembroke Avenue
- The street-side ditches along North Armistead Avenue south of Mercury Boulevard
- The street-side ditches in the North King Street service road area east of Seldendale and south of West Gilbert Street

The Drainage Maintenance division may add additional street-side ditches to their "critical" list if they determine that conditions in a street-side ditch require additional cleaning during the year.

3.5 Drainage Infrastructure Cleaning

There are two operators in the Drainage Maintenance division who are responsible for inspecting all drainage system structures twice per year and they are responsible for cleaning these structures as needed. This includes inspections and cleaning of curb drop inlets (CDI's), yard drains, driveway pipes, and any piped ditches throughout the system. The current inventory of 25,243 structures increases weekly as additions to the drainage system are built throughout the city. Each of these operators uses a combination vacuum/wash truck vehicle and works alone to accomplish these tasks. Their territories are defined as the entire city area either east or west of LaSalle Avenue which bisects the city.

CDI CLEANING

Calls for cleaning service are also generated through the 311 Customer Call Center. Once a call is received, the inspection of the structure takes place and it is cleaned if necessary. These operators also support the ditch crews with the clearing of leaves from the street-side ditches as assigned and assist the construction crew with vacuum excavations to repair cave-ins in the system. Vacuum excavations are faster and much more cost effective than traditional excavation methods.

Additionally, these two operators inspect and clean all the storm drains located on the Hampton City Schools properties. This process begins while the schools are out for spring break and is completed during the summer vacation period so as to impact the school system as little as possible.

3.6 Drainage Infrastructure Repair/Construction

The repair and construction of drainage infrastructure is accomplished by a five member crew within the division. They are responsible for repairing all cave-ins, washouts, repairing CDI structures, installing driveway pipes once the resident has purchased the material, repairing head walls in the drainage system, replacing broken pipes, or making any other minor repairs as necessary. They have two single axle dump trucks, a crew cab pick-up truck, a tool truck, a mini-excavator, a front-end loader, a backhoe, and a Gradall at their disposal to accomplish these repairs. In the event the repair will require the support of larger dump trucks, the division has tandem ones available.

The same crew is responsible for the construction of new drainage infrastructure as necessary including; piping new ditches, building brick manhole structures, building CDI boxes and yard drains, installing head walls, and placing rip rap stone as necessary. They have available for their use the same vehicle equipment inventory used for repairs to the system. This crew also performs mechanized ditching with the Gradall in support of the street-side ditching crew as requested.

3.7 Detention/Retention Ponds

There are seven (7) city owned detention/ retention ponds, grassy areas, that are maintained by the four member back ditching crews on a scheduled basis at least twice a year. They are assisted in the maintenance portion of this task by utilizing the division's slope mower. The ponds are checked for obstructions and if any are found they are immediately removed to insure the ponds will perform as designed.

DETENTION POND

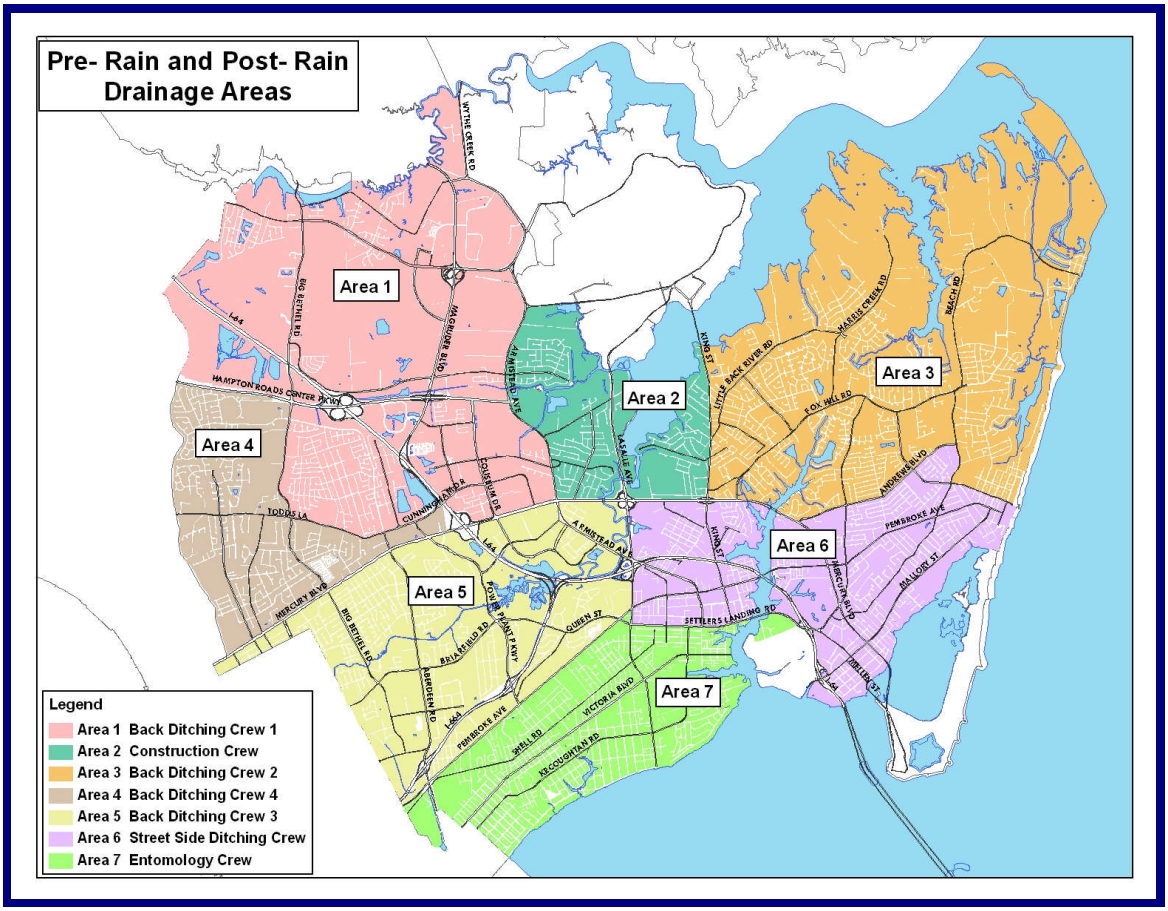
RETENTION POND

In the event that a significant rain event such as a Nor'easter or a hurricane is forecast, inspections of the ponds are made both pre and post event to insure that the ponds are operating as designed and no debris has collected in them from the storm. Additionally, the bottoms of the detention ponds, normally a concrete structure, are cleaned mechanically as needed following the yearly inspections performed by the Drainage Maintenance division using an assortment of excavators to perform this task as required.

3.8 Pre and Post Rain Event Drainage System Inspections

In the event a major rain event is forecast such as a nor'easter or a hurricane, drainage maintenance personnel conduct both pre-event and post-event inspections of the drainage system. The pre-event inspection is designed to be a proactive action so that trouble areas can be identified and any areas that are blocked by debris can be unstopped prior to the event. This will facilitate proper drainage flow in the system; reduce flooding during the event, and safeguard property. The post-event inspection is designed to check the system to again unstop any blockages that have occurred during the storm event, inspect the system for any damage that will require future repair, and to insure that any residual water left in the system can drain properly.

All drainage personnel with exception of the construction crew have assigned "drainage routes" that they run for both pre and post event inspections. Each inspection crew utilizes a dump body pick-up truck or a single axle dump truck to transport the crew and various hand tools to clear any blockages found. The map below identifies the specific areas that each drainage crew covers during these inspections.



Pre-Rain and Post-Rain Drainage Areas

Actual locations that crews check

Area 1	
Hunt Club Boulevard/Bethel Temple Church	Ridgecrest Drive
Bonwood Drive	Newgate Village Drive
Willow Tree Road	Fairmont Drive
1007 Todds Lane	Big Bethel Road
NASA Drive	Topping Street
Avon Road	Burton Street
Northampton Ditch	Semple Farm Road
Winchester Ditch	Saunders Road
Farmington Canal	Sacramento Drive
Berkshire Terrace	Mary Ann Drive

Area 2	
E. and W. Gilbert Street-includes back alley	Donald Street
57 Salina Street	Mac Alva Drive
Salem Street	Lantana Lane
Doolittle Road	Bland Street
Ransone Drive	Beverly Street
Selendale Drive	Logan Street
Green Street	Clover Street
Easterly Avenue	Sperry Court
North King Street	Roane Drive
Quinn Street	82 Cavalier Road
Roland Drive	Charlton Drive
West Little Back River Road	15, 16, 35 Inglewood Drive
Rebel Street	Wheatland Road
N. Keith Road	Raymond Drive
Westover Street	Kenwood Drive
Shoreline Drive	Riverdale Drive
Lands End Circle	Tanglewood Drive
W. Bayberry Court	Marcella Road
Bland Street	St. Paul Court
Thornrose Street	Loura Court
E. Preston Street	Diggs Drive
W. Lamington Street	Deerfield Boulevard
Hampshire Drive	Bannister Drive

Area 3	
45 Cavalier Road	Bedford Court
53 Westover Street	Burnette Drive
206 Shawen Drive	Morgan Drive
163 E. Little Back River Road	Price Street
201 Forrest Street	Cherry Acres Drive
209 Beverly Street	Club Run Boulevard
410 Clover Street	Colonial Acres Drive
100 Rosewood Drive	West Preston Street
7 Oakville Road	Stockton Drive
198 Harris Creek Road	Sharon Bass Drive
Pacers Point off Harris Creek Road	Mohawk Drive
83 Fox Hill Road	Salt Pond Road
Pine Grove Terrace between Fox Hill Road and Walnut Street	Silver Isles Boulevard
427 Walnut Street	Hall Road
39 Longwood Drive	Womack Drive
22 St. Albans Drive	Johnson Road
Amherst Road	Windmill Point Road
Barnes Court	Beach Road

Area 4	
109 Roberta Drive	842 Redheart Drive
31 Roberta Drive	Edgewood Drive
1218 Todds Lane	Baines Lane
Bellwood Road	Farmington Canal
Whealton Road	Adwood Court
Wellington Drive	Cunningham Drive Canal
Hillsboro Court	4110 Hazelwood Road
Orcutt Avenue	Bonifay Drive
Adwood Court	

Area 5	
Virginia Heights ditch off E Street	Sheralyn Place
Joynes Road	Findley Square
Manchester Drive	Findley Street
W. Lewis Road	Murray Avenue
1600 block Briarfield Road	Marple Lane
East Walker Road	4900 82nd Street
North Walker Road	100 Briarwood Drive
Lassiter Drive	Mark Drive
Newmarket Creek between City Line and Power Plant Pkwy.	Myra Drive
Westminister Drive	E. Weaver Road
Gildner Road	Thornbriar Court
Custer Court	Pickett Street
Twin Oaks Drive	Janet Drive
Gumwood Drive	Prince George Drive
Aspenwood Drive	Prince James Drive
Hickory Hill Drive	Ward Drive
Pennwood Drive	West Queen Street

Area 6	
East Queen Street Downtown	817 East Mercury Boulevard
East Queen Street Hampton University	28 N. Willard Street
North 1st Street	S. Willard Street
North 2nd Street	West County Street
North 4th Street	East County Street
North 5th Street	N. Hope Street
South 4th Street	13 and 16 West Sewell Avenue
South 5th Street	73 Fulton Street
Hunlac Avenue	542 East Mercury Boulevard
Benthall Road	East and West Taylor Street
Rogers Avenue	East and West Virginia Avenue
Dead end of Mary Street	East and west Chamberlin Avenue
Dead end of Connie Street	East Hygeia Street

Area 6	
Atlantic Avenue	803 Perry Street
Herbert Street	South Mallory Street
Seaboard Avenue	Old Buckroe Road
Bayshore Lane	Bryant Drive Canal
North Mallory Street	Resort Boulevard
South Cypress Street	River Street
Old Point Avenue	

Area 7	
Lincoln Street	Wythe Crescent Drive
Kecoughtan Road	Robinson Road
East and West Sunset Road	Orchard Avenue
East Southampton Avenue	Claremont Avenue
Moss Avenue	Hollywood Avenue
Victor Street	Bay Avenue
Ivy Home Road	Pear Avenue
Otley Lane	Cherry Avenue
200 Congress Avenue	Apple Avenue
Castby Jones Drive	Locust Avenue
145 Clyde Street	Laguard Avenue
150 Armstrong Drive	Syms Street
Regent Street	Gloucester Street
LaSalle Avenue	Braddock Road
3700 Abbey Court	3802 Roadsview Avenue
3201 and 3301 Chesapeake Avenue	Childs Avenue
68 and 128 Manteo Avenue	326 Catalpa Avenue
818 Teach Street	2528 West Pembroke Avenue
Pocahontas Place	511 Brightwood Avenue
Jamestown Ave	421 Homestead Avenue
Vaughan Avenue	413 Highland Avenue
New Street	400 Alleghany Road
Greenbriar Avenue	400 Colonial Avenue
O'Canoe Place	Quincy Street
Harbor Drive	Norwood Circle
Chincoteague Drive	Newport News Avenue
Chesterfield Road	Shell Road Basin
Crescent Drive	Powhatan Parkway
Wythe Parkway	Shell Road/Va. School
Chancellor Road	Park Place Subdivision

4 Stormwater Regulation Requirements

4.1 MS4 Permit

The Commonwealth of Virginia requires the city obtain an approved Municipal Separate Storm Sewer System (MS4) Permit and develop an implementation plan yearly through the Department of Conservation and Recreation. This permit details our obligations not only to that state agency but puts the city in compliance with the federal Clean Water Act. Not being in compliance with our MS4 permit would result in steep fines and penalties being levied against the city. The drainage division has specific responsibilities under this permit and implementation plan which includes cleaning, maintenance, and repair of the entire drainage system and seven (7) public BMP's. The Stormwater Engineer is responsible for reporting our actions to the Department of Conservation and Recreation on a yearly basis to renew the permit. A copy of the current MS4 Permit and the implementation plan are available for review through the Stormwater Engineer's office.

Drainage maintenance provides a large amount of information to the Stormwater Engineer prior to the preparation of the MS4 Permit pulled from records maintained by the division and the 311 Call Center. The permit requires that they quantify the number of drainage structures and feet of pipeline cleaned during the fiscal year; report the tons and pollutant characteristics of material removed from drainage structures; state the number of linear feet of ditches cleaned and what percent of the total that represents; report the tons and pollutant characteristics of material removed from the ditch system; and identify the total number of drainage maintenance requests received during the fiscal year received either directly by the division or through the city's call center. They also are required to include a list of any major in-house drainage projects that they are undertaking as a part of the permit.

4.2 Newmarket Creek Maintenance Agreement

This agreement between the City of Hampton and the City of Newport News is a 40 year agreement that started in 1995 and ends in 2035 to maintain this system which is used as a major outfall canal for both of the City's drainage systems.

This canal system was constructed for a flood protection project in the late 1960's and turned over to the City of Hampton and Newport News in 1970 by the Army Corps of Engineers. The Army Corps of Engineers conduct an inspection of the canal system once every three (3) years and give the cities a report on maintenance needs.

❖**APPENDIX A - Newmarket Creek Maintenance Agreement**

4.3 BMP Inspections

Inspections of BMP's, detention and retention ponds are done on a yearly basis by Drainage Maintenance personnel. Currently there are 7 BMP's that are considered public and 159 BMP's that are privately owned. Inspections are made on all public and private BMP's and only if a violation is discovered does the Stormwater Engineer get involved in the process. Notification of a violation is mailed to the owner of the BMP detailing the violation and the steps required to correct the infractions. Normally the owner of the BMP will take any corrective action required once notified. In extreme cases if the owner of the BMP fails to take corrective action, the city can perform the required work and back charge the costs to the BMP owner.

All residential BMP's that are not city owned are only inspected on an as needed basis following receipt of a request by the neighborhood association or a complaint. Cleaning and maintenance of residential BMP's is the responsibility of the neighborhood homeowner's association.

4.4 Illicit Discharge Testing

Illicit discharge testing is required as part of the MS4 Permit and is done randomly at 25 sites throughout the city each year. These sites tested are primarily located at or near industrial properties and the testing is performed in order to identify any illicit discharges that may be occurring into the stormwater system. As a best practice the testing is done during a dry time of the year which may indicate that any water in the ditch may be an illicit discharge coming from the industrial site.

Additionally, the Stormwater Engineer receives complaints of stormwater violations from the general public normally in residential areas. These calls could possibly trigger an illicit discharge test but they are normally just issues involving vegetative waste in the drainage system. These complaints include residents or lawn maintenance companies raking or blowing leaves and grass into the storm drain system, or blockages caused by residents putting leaves into the CDI's during the fall season. These violations are technically considered illicit discharges into the drainage system and have to be quantified and reported as part of the yearly MS4 Permit.

5 Long Range Projects and Plans

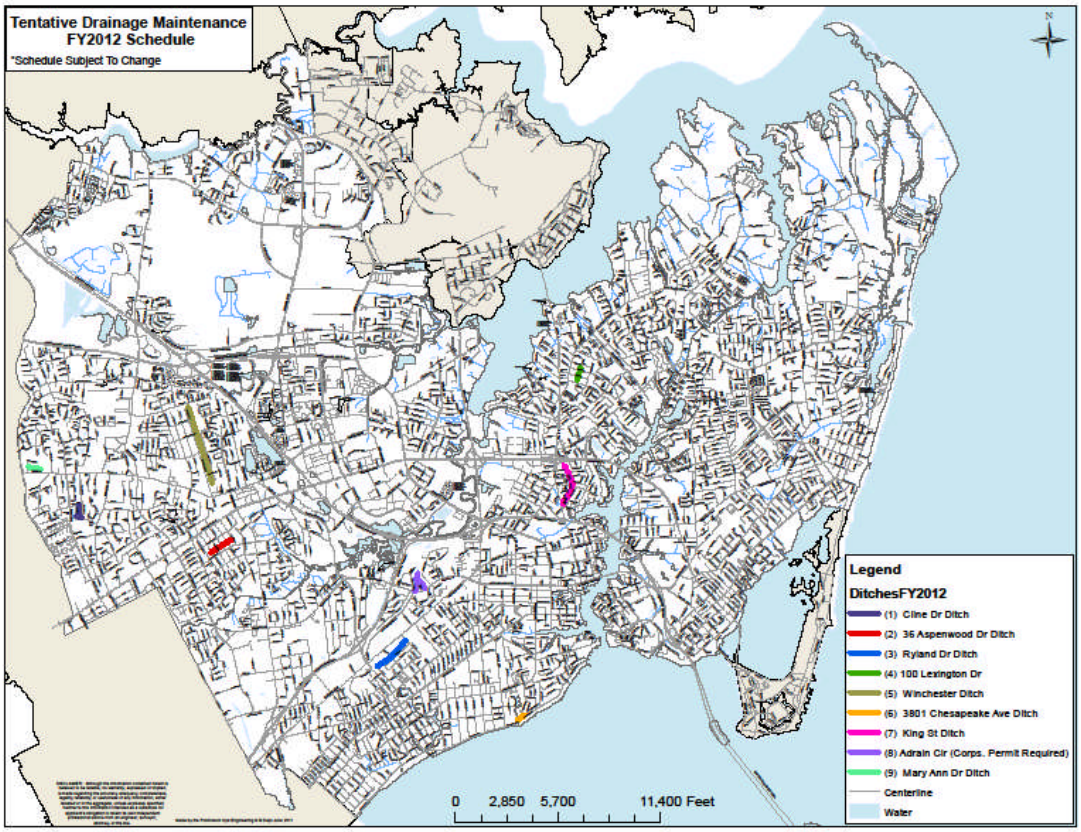
5.1 GIS Mapping of the Drainage System

At present, there are 27,451 drainage structures and 26,417 pipes/ditches in the City of Hampton. All of the drainage system accepted by the City has either been mapped with GPS by City crews or mapped with limited accuracy by a consultant on a previous project. Starting in late 2006, crews began the process of picking up inverts, tops, and precise locations of all structures in the system using GPS and survey equipment.

We have mapped a total of 6,708 structures or 24.4% of the City in 36 months. During this time we have assisted in the design of three construction projects and also provided assistance to the Wastewater and Engineering survey parties. We have accelerated the process of capturing points when working exclusively on the drainage infrastructure and recently hired a new surveyor to begin work on August 24, 2009 so that we will have a second full crew of surveyors. This will allow us to continue on this pace of picking up data points while performing assisting the Streets, Drainage, Wastewater, Engineering and Traffic divisions.

5.2 Outfall Ditch Maintenance Plan

The following outfall ditches are scheduled for major cleaning and re-grading during the FY 2009 to FY 2013 time period. These particular ditches were identified as in need of major work based upon their current condition following inspections made by division personnel. This work will include major ditch bottom clearing and cleaning to increase the capacity of the ditch and facilitate the movement of the maximum amount of drainage within the ditch. All maintenance on any ditch that requires permits from state agencies will be dependent upon the city obtaining the necessary permit(s) to complete the work. Until all permits can be obtained, the work cannot be done. The planned work may take up to 45 days depending on the size of the outfall ditch and the conditions found once work begins. Work priorities on these outfall ditches may change due to political considerations, major storm events, or other delays not within the control of the drainage division.



FY 2012 PLANNED SCHEDULE

- Ryland Drive
- Winchester Ditch from Burton St. to Todds Lane
- King Street Ditch from Huffman Dr. to Plaza Dr.(Corp permits required)
- Adrian Circle (Corps permits required)
- 71 Cline Drive Ditch
- 114 Lexington Avenue
- 36 Tallwood and 36 Aspenwood Bethel Park
- 3801 Chesapeake Blvd.
- Mary Ann Drive Ditch from Downer Lane to Government Ditch

FY 2013 PLANNED SCHEDULE

- Bryant Drive Ditch from Old Buckroe Rd. to Scotland Rd.
- E. Pembroke Ave. Ditch from Pembroke Ave. to Old Buckroe Rd.
- Buckroe Shopping Center Ditch from Skyline Dr. to Andrews Blvd.
- Zinzer Rd. Ditch from Andrews Blvd. to Old Buckroe Rd.
- Sam Rust Dr. Ditch (Copeland Park)
- Shell Road Basin

FY 2014 PLANNED SCHEDULE

- Michigan Dr. Outfall to wetlands
- Beach Rd. Ditch from Willow Rd. to Beach Rd.
- Womack Dr. Ditch from dead end to Addison Dr.
- Northampton Ditch from Mercury Blvd. to Newmarket Creek.
- Derry Road Ditch from Derry Rd. to Scotland Rd.

FY 2015 PLANNED SCHEDULE

- Theodore St. Ditch from Theodore St. to Prentiss Lane
- Stockton Drive Ditch (Corps permits required)
- Orcutt Ave. Ditch from Orcutt Ave. to Government Ditch
- Hale Dr. Ditch from
- Andrews Blvd. to dead end
- Virginia Heights Outfall Ditch

FY 2016 Planned Schedule

- Wellington Drive
- Langley Industrial Ditches
- Bryant Drive
- Pembroke Avenue/ Westwood Avenue

5.3 Upcoming High Interest Drainage Projects

There are several major maintenance and construction high interest projects planned, or being planned, by the Drainage Maintenance division. There are several funding sources identified for these projects and it should be understood that the priority on these projects could be affected by the same issues that may affect the outfall ditch maintenance plan as well as weather conditions and unforeseen issues that always arise during construction projects. Listed below are the projects, some of the work to be accomplished, an anticipated time frame, if known and the current funding source identified for the work. Due to budget cuts and personnel cuts most projects will be contracted out until further notice.

1) 200 Congress Avenue – Contract two CDIs and add pipe on Catsby Jones Road into waterway. Improve runoff on private property. This will also include raising the roadway as well as curb and gutter in the area of the pipe and CDIs installation area. Project is currently on hold.

2) Edgewood Drive drainage improvements, to improve streetside ditch runoff are currently awaiting easements.

5.4 Drainage Division Future Equipment Needs

There are heavy equipment needs that should be addressed as the Drainage Maintenance division moves into the future and expectations on construction and maintenance projects

increase. These needs are based upon the collective experience of the division personnel and will allow the division to more efficiently and productively perform their construction and maintenance duties. This list is not all inclusive and purchase prices for these machines have not been estimated as bids would need to be placed for such major expenditures. Additionally, funding sources for the purchase of any new equipment for the division have yet to be identified.

1) One track-style Bob Cat loader for use during ditch maintenance.
2) A second mini-excavator for the division due to the increased work load.
3) A third combination wash and vacuum truck for the division to accommodate an increased work load and to be available as a back-up for breakdowns of the other similar machines.
4) A second Gradall excavator is needed so that one can be assigned to the construction division and the other to the street-side ditching crew.
5) Slope mower with more reach capabilities to maintain outfall ditches on a more frequent bases and also to have a backup for existing (2) slope mowers.

GRADALL

5.5 Drainage Education Program

Currently there are no division resources committed to drainage education and after the Environmental Education Manager left the city drainage education efforts dramatically decreased. It is believed that the general public is aware of drainage issues, especially during major storm events or when flooding occurs, but there needs to be an renewed and increased effort put forth to inform the public on drainage issues, waterway clean-ups, and what constitutes a violation to the Drainage Ordinance section of the City Code. The Stormwater Engineer receives drainage violation reports from the 311 Customer Call Center and either sends a letter detailing the nature of the violation to the resident or has the division investigate the violation and report if there is any

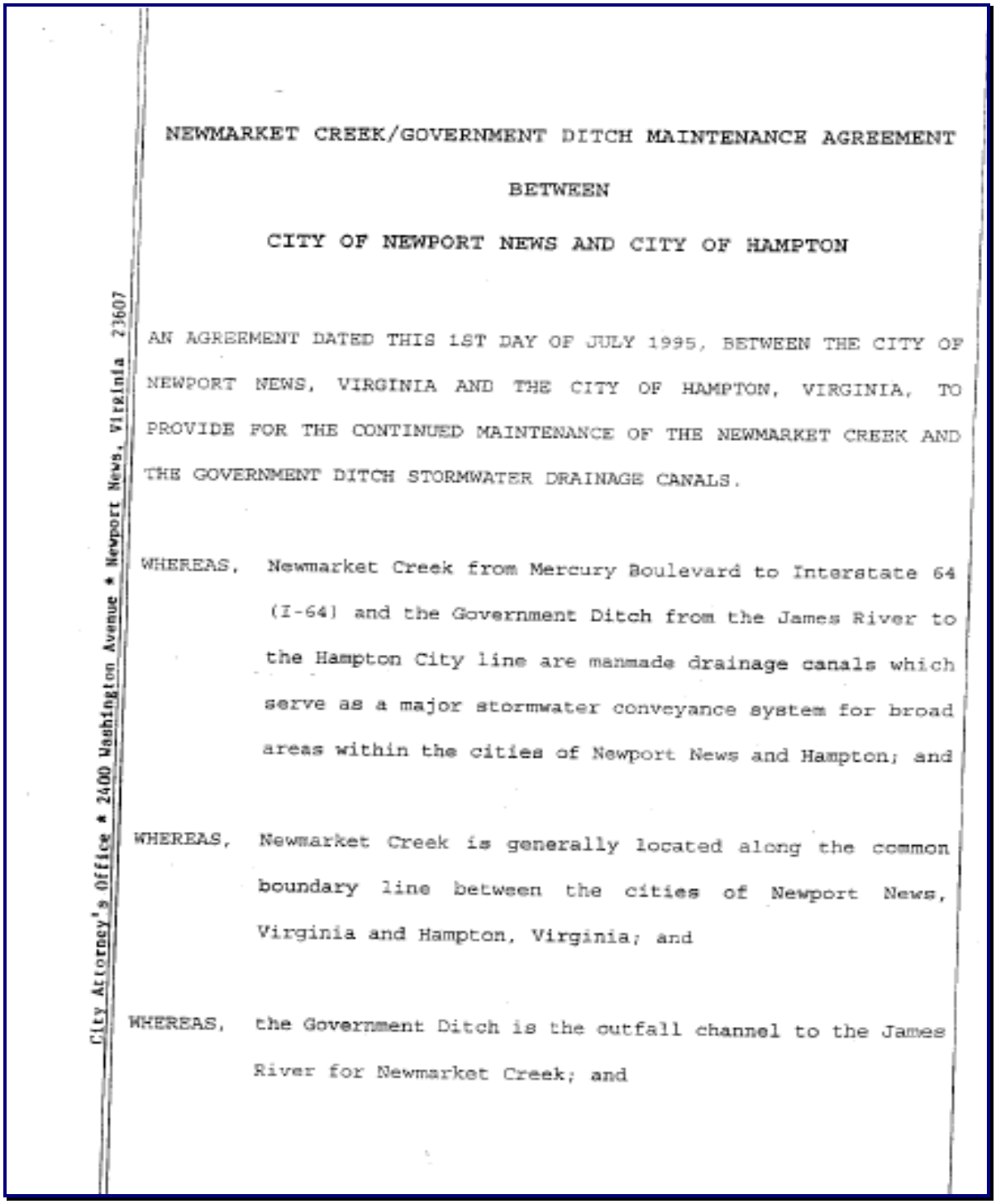
violation occurring as reported. Violations normally take place during the fall season as residents place loose leaves in the curb and gutter or drainage system either unaware that it is a violation or simply not caring that it is. These violations include blowing leaves and grass into the CDI's causing major blockages within the system when rain events occur.

In the event that illegal dumping is suspected the division can distribute a hang tag to an individual residence or a group of homes in the area where the illegal dumping occurred. Normally this is of little value as it simply irritates those residents who were tagged and had no part in the actual illegal dumping. It is imperative to witness and document the illegal dumping in order to have any chance of prosecution of the case and with limited resources available this is not happening at the present time. Additionally, there is no recollection of any individual being prosecuted under the current Stormwater Ordinance contained in the City Code.

The Clean City Commission has taken the lead in continuing drainage education efforts and it is recommended that this effort be increased and funded as necessary. Once the educational effort takes root it is recommended that the enforcement of the Stormwater Ordinance be enhanced to facilitate prosecution in cases where egregious violations occur. It is also believed that the general public can greatly assist the Drainage Maintenance division in maintaining the drainage system. Their knowledge of the system is key to the success of a drainage education program.

Appendix A -- Agreements

AGREEMENT 4.2.1 ◆ NEWMARKET CREEK MAINTENANCE AGREEMENT



NEWMARKET CREEK/GOVERNMENT DITCH MAINTENANCE AGREEMENT

BETWEEN

CITY OF NEWPORT NEWS AND CITY OF HAMPTON

AN AGREEMENT DATED THIS 1ST DAY OF JULY 1995, BETWEEN THE CITY OF NEWPORT NEWS, VIRGINIA AND THE CITY OF HAMPTON, VIRGINIA, TO PROVIDE FOR THE CONTINUED MAINTENANCE OF THE NEWMARKET CREEK AND THE GOVERNMENT DITCH STORMWATER DRAINAGE CANALS.

WHEREAS, Newmarket Creek from Mercury Boulevard to Interstate 64 (I-64) and the Government Ditch from the James River to the Hampton City line are manmade drainage canals which serve as a major stormwater conveyance system for broad areas within the cities of Newport News and Hampton; and

WHEREAS, Newmarket Creek is generally located along the common boundary line between the cities of Newport News, Virginia and Hampton, Virginia; and

WHEREAS, the Government Ditch is the outfall channel to the James River for Newmarket Creek; and

City Attorney's Office ★ 2400 Washington Avenue ★ Newport News, Virginia 23607

WHEREAS, it is in the best interest of both the cities of Newport News and Hampton to jointly maintain Newmarket Creek and the Government Ditch.

NOW, THEREFORE, in consideration of the recitals hereinbefore set forth and of the mutual agreements herein contained and for other good and valuable consideration;

A. The City of Newport News and the City of Hampton do hereby agree as follows:

1. Routine maintenance shall include grass cutting or mowing; debris and litter control; minor slope erosion repair; rodent, insect and odor control; access, security, and fence maintenance; and other similar or related activities.

2. Non-routine maintenance shall include structural repairs of concrete slabs, side slopes, transition walls, energy dissipators, pipe culverts, box culverts, and other major appurtenances.

3. Sediment and debris removal shall include the removal and disposal of accumulated vegetation, sediment and silt, and blockages from trees, branches, leaves and other foreign objects that may obstruct the flow of water in the channel.

4. Newmarket Creek includes the manmade stormwater drainage channel, all fences, access roads and appurtenances contained within the channel right-of-way or easement boundary and borders that portion of the common Hampton and Newport News corporate boundary from Mercury Boulevard to the Hampton Roads Center Parkway crossing, or approximately 16,000 feet in a northerly direction along the channel.

5. Government Ditch includes the manmade outfall stormwater drainage channel, all fences, access roads and appurtenances contained within the channel right-of-way or easement and located in the City of Newport News south of South Avenue from the James River to the Hampton City line.

City Attorney's Office • 2400 Washington Avenue • Newport News, Virginia 23607

6. Eligible costs include direct labor, equipment, materials, surveying, engineering, construction, and inspection costs. Eligible costs specifically excludes overhead and administration costs except such costs for services that are being performed by an independant contractor or consultant.

7. Each city shall cooperate and grant access to Newmarket Creek and the Government Ditch for the purposes of this agreement, water quality testing, inspection, illegal discharge investigations, removal of blockages to restore drainage and prevent unauthorized access to private and public property by way of the creek and the ditch.

8. Each city shall prohibit the approval of development site plans that divert flow from outside the mutually agreed upon drainage basin for the facility.

9. Each city shall issue permits for the performance of any work covered by this agreement, except for routine maintenance, whether it is performed by a private contractor or public employee forces, in accordance with

existing federal, state and local laws, rules and regulations.

10. Each city shall perform a joint inspection with the other of Newmarket Creek and the Government Ditch for the purpose of reviewing the year's maintenance efforts, and to plan future years non-routine maintenance activities, at a time and on a date that will provide sufficient time to plan and budget for such activity.

11. Each City shall perform or have performed by contract quarterly routine maintenance functions along Newmarket Creek from its center line to each City's respective side of the creek.

12. Each City shall perform or have performed by contract on an as-needed basis all non-routine maintenance functions along Newmarket Creek from its center line to each City's respective side of the Creek as mutually determined by the cities.

13. Each city shall approve a sediment and debris removal

City Attorney's Office • 2600 Washington Avenue • Newport News, Virginia 23607

schedule for Newmarket Creek prior to the beginning of each fiscal year.

14. This agreement shall be effective retroactively from and after July 1, 1995.

B The City of Hampton further agrees to:

1. Cost share with the City of Newport News on a 50/50 basis for all eligible non-routine maintenance costs for the Government Ditch.

2. Cost share with the City of Newport News on a 50/50 basis for all eligible sediment and debris removal costs for Newmarket Creek.

3. Make payment to the City of Newport News on or about every January 1 for Hampton's estimated share of the fiscal year's non-routine and sediment and debris removal maintenance costs. Payment shall be based upon mutually agreed upon estimates of probable cost for such work.

4. Guarantee and provide all necessary access as required for the City of Newport News to carry out the provisions of this agreement.

5. Make payment of any additional funds that may be required to cover the "actual" costs of cost shared work performed on or about July 1 in the year after the work is completed.

C. The City of Newport News further agrees to:

1. Perform or have performed by contract sediment and debris removal for Newmarket Creek, the cost of which shall be shared on a 50/50 basis with the City of Hampton.

2. Provide the City of Hampton by October 1 of each year the previous year's cost accounting of expenditures for non-routine maintenance costs for the Government Ditch and sediment and debris removal costs for Newmarket Creek.

3. Grant at no cost to the City of Hampton an exclusive easement across City of Newport News owned property for

City Attorney's Office • 2400 Washington Avenue • Newport News, Virginia 23607

access control to that segment of Newmarket Creek from Dresden Drive to I-64 as shown on the attached plat.

4. Provide the City of Hampton by February 1 of each year a list of work and probable costs that are to be "contracted" for the upcoming fiscal year.

5. Apply any funds paid by the City of Hampton that exceed their share of the actual costs for work performed on a shared cost basis toward the subsequent fiscal year's program.

D. The term of this agreement shall be forty (40) years from the first day of the month following the date of its approval and execution by authorized officials of both parties.

E. Either party may terminate this agreement at any time by giving ninety (90) days written notice of its intent to terminate to the other party prior to July 1 of any given year. The notice required by this paragraph and any other notices required by this agreement shall be deemed to have been given upon mailing same to the City Manager for the other

party by first class mail with postage prepaid.

F. Should any part of this agreement be declared either unconstitutional or unenforceable by a court of competent jurisdiction, the entire agreement shall terminate as of the effective date of the court's decision unless both parties execute an reaffirmation of the agreement which excludes the unconstitutional or unenforceable provision(s).

IN WITNESS WHEREOF the parties have caused this agreement to be executed by their representatives who, in that behalf, have been first been duly authorized.

City of Hampton, Virginia

Robert J. O'Neill, Jr.
City Manager

Attest:

City of Newport News, Virginia

Edgar Maroney
City Manager

City Attorney's Office • 2400 Washington Avenue • Newport News, Virginia 23607

9

MEMORANDUM OF AGREEMENT

THIS AGREEMENT, made this 27th day of Jun, 2009, by and between City of Hampton, a political subdivision of the Commonwealth of Virginia, party of the first part; and the UNITED STATES OF AMERICA, acting by and through the United States Air Force, party of the second part.

WITNESSETH: That for and in consideration of the Agreement of the United States Air Force to spray for the eradication of mosquitoes by airplane within the aforesaid political subdivision as shown outlined by heavy black lines on the map or plat marked "EXHIBIT A," attached to this Agreement and made part hereof, for a term extending from the date of this instrument, through 31 December 2009, the party of the first part agrees as follows, to wit:

1. That the City of Hampton agrees to save the party of the second part harmless from any claim or lawsuit for loss or damage to property in connection with the performance of this Agreement, including but not limited to, claims arising from the possible invasion of property rights by low altitude flying and any and all claims arising out of or occasioned by any trespass over or upon public or private property whether such be for the purpose of spraying or inspecting, but only to the extent allowed by law, without waiving its sovereign immunity, and specifically excluding claims arising from aerial crash, collision, or from objects accidentally falling from the aircraft dispensing the pesticide, but only to extent allowed by applicable law and without waiving its sovereign immunity.

2. That this Agreement shall be binding upon said parties during the period from the date of this instrument through 31 December 2009, and shall be renewable from year to year thereafter, at the option of the parties.

FURTHER WITNESSETH: That for and in consideration of the above set forth Agreement of the party of the first part, the party of the second part agrees to spray for the eradication of mosquitoes by airplane within the City of Hampton as shown outlined by heavy black lines on the map or plat marked "EXHIBIT A," attached to this Agreement and made part hereof, for the term extending from the date of this instrument through 31 December 2009.

IN WITNESS WHEREOF, the parties of the first and second part have caused their signatures and seals to be hereto affixed by their proper officers, they having first been duly authorized so to act.

CITY OF HAMPTON

by: _____
City Manager

LANGLEY AIR FORCE BASE, VIRGINIA

_____
Commander
1st Mission Support Group
Langley Air Force Base, Virginia

ATTEST:

by: _____
City Clerk

APPROVED AS TO FORM:

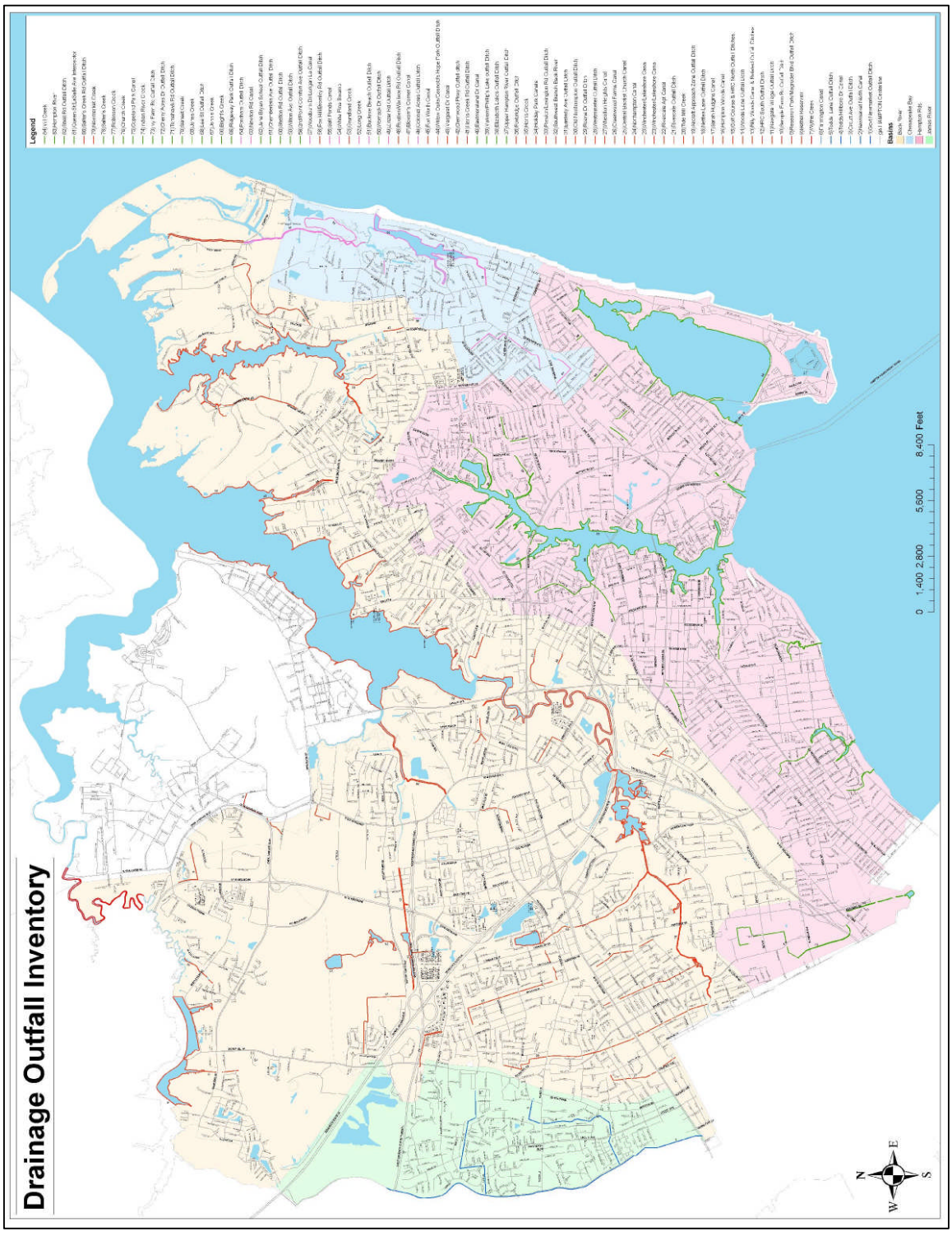
_____
City Attorney

PREPARED/REVIEWED BY:

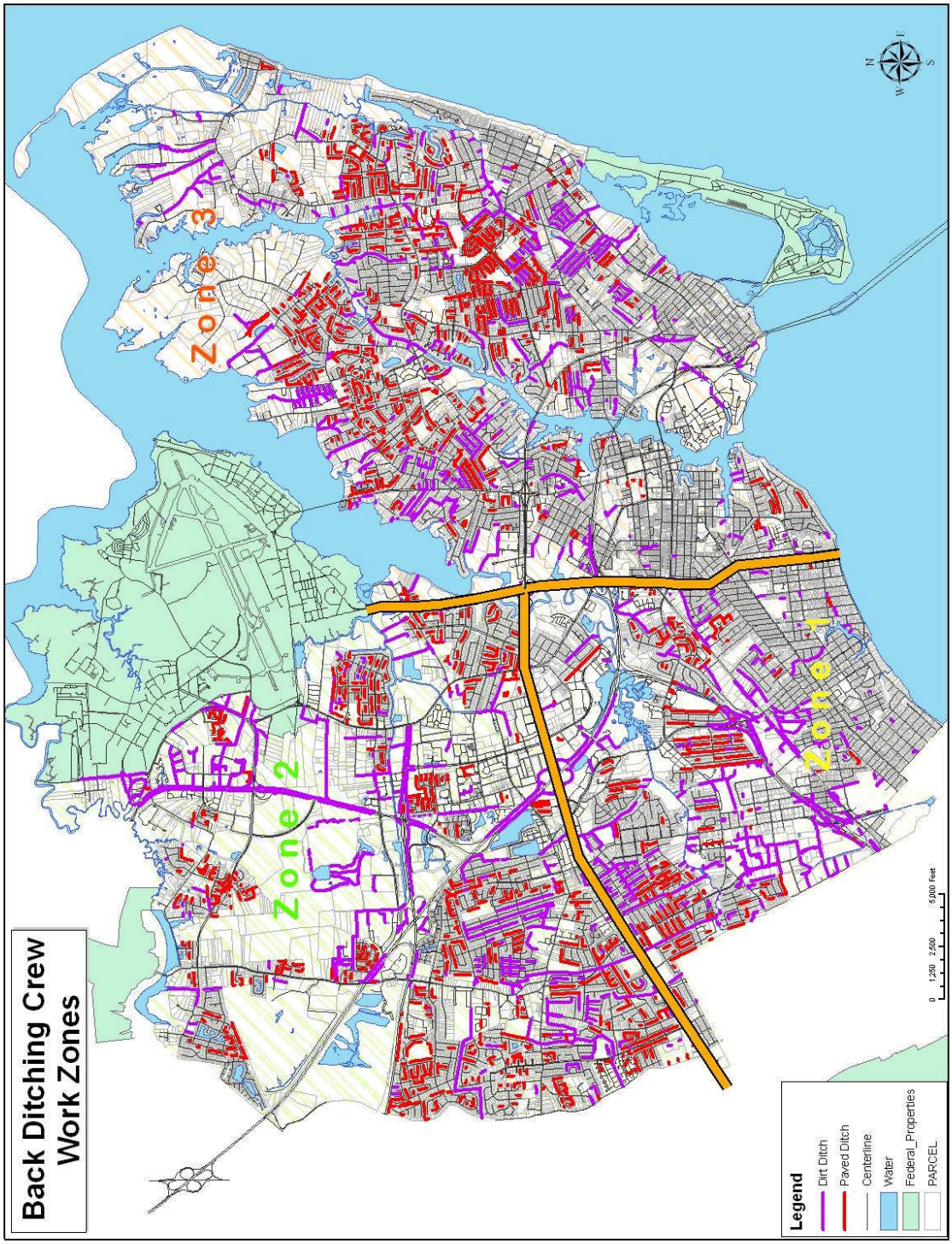
_____

Appendix B – Maps

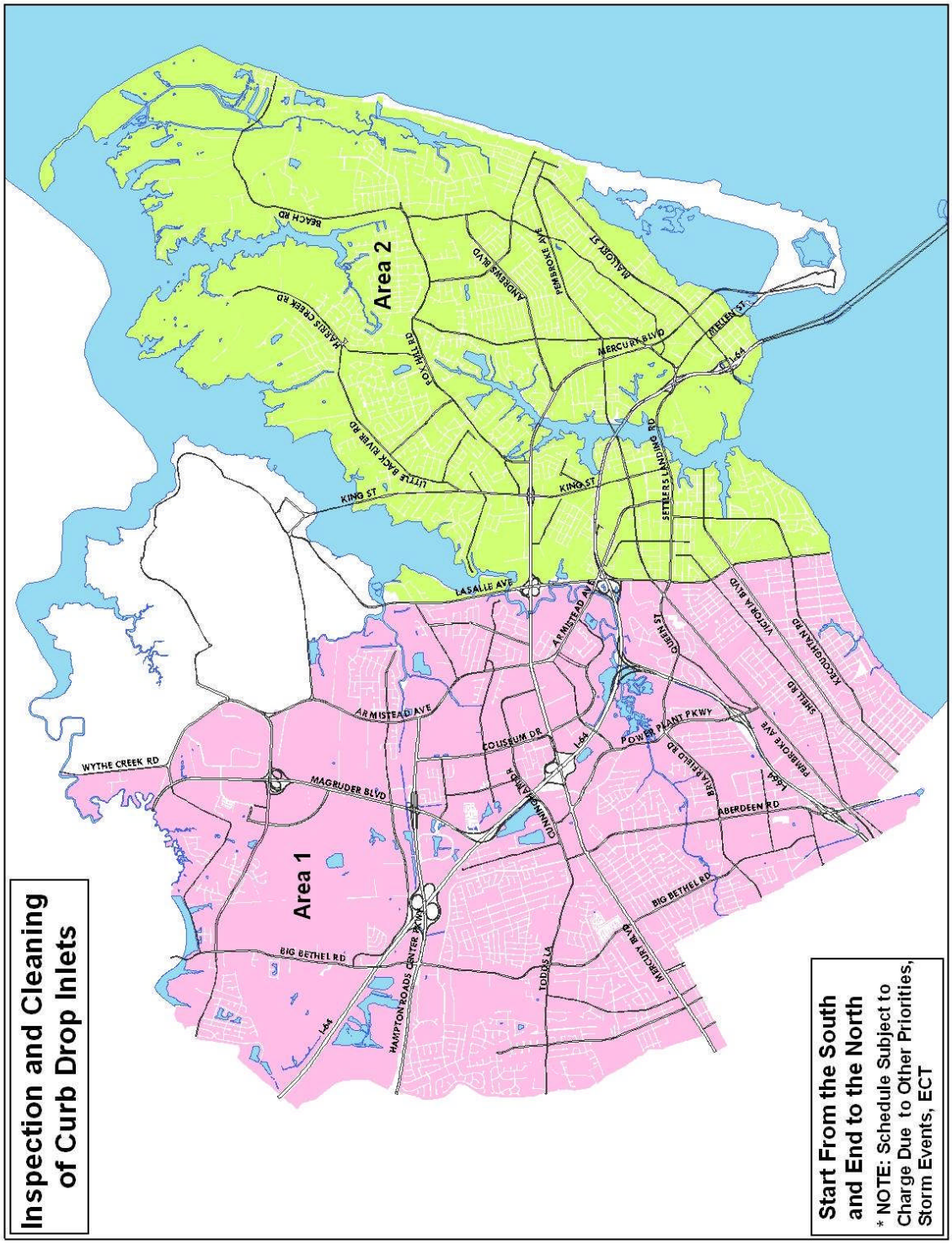
MAP 3.1.1 ◆ OUTFALL DITCHES INVENTORY



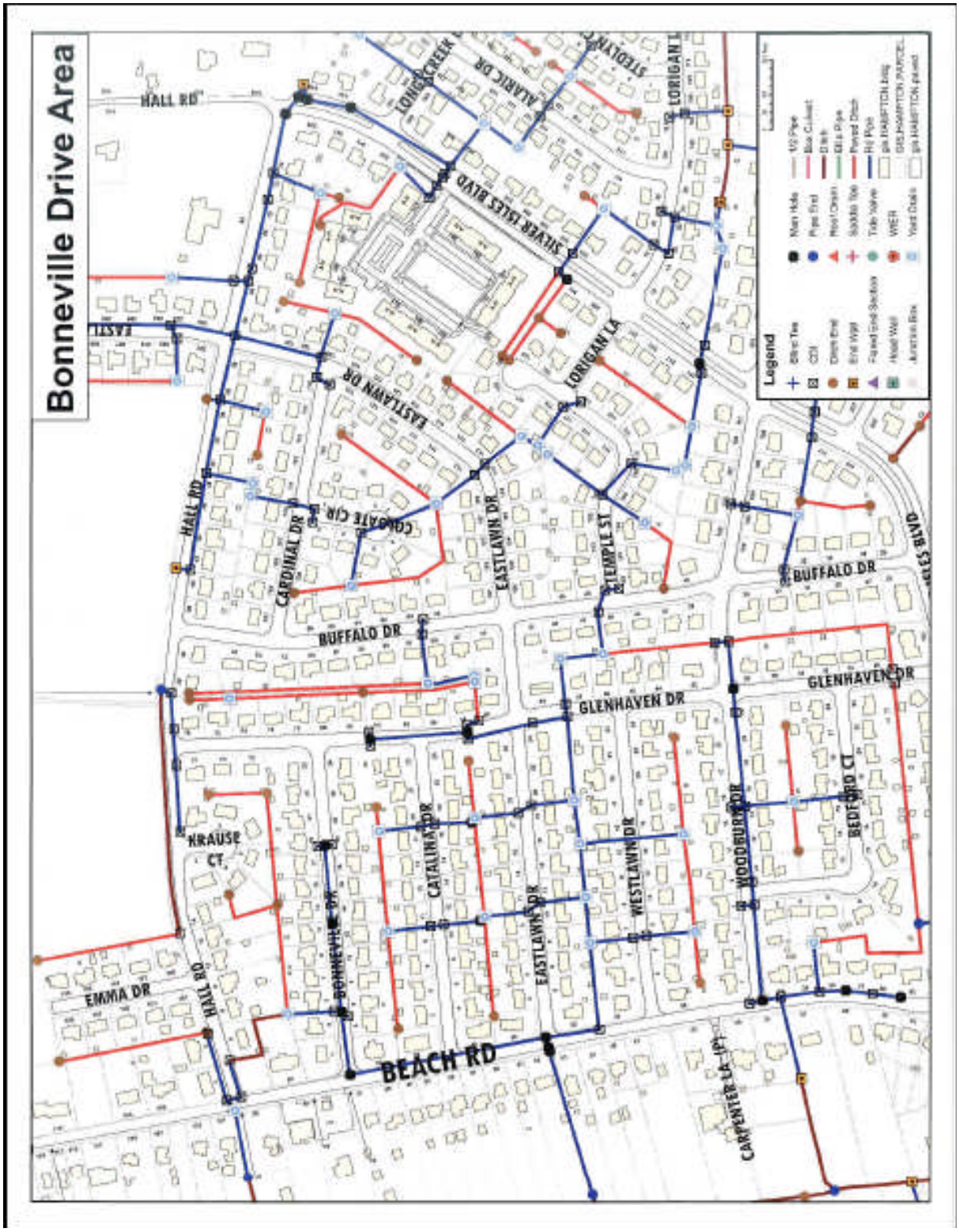
MAP 3.2.1 ◆ BACK DITCHING CREW WORK ZONES



MAP 3.4.1 ◆ INSPECTION AND CLEANING OF CURB DROP INLETS

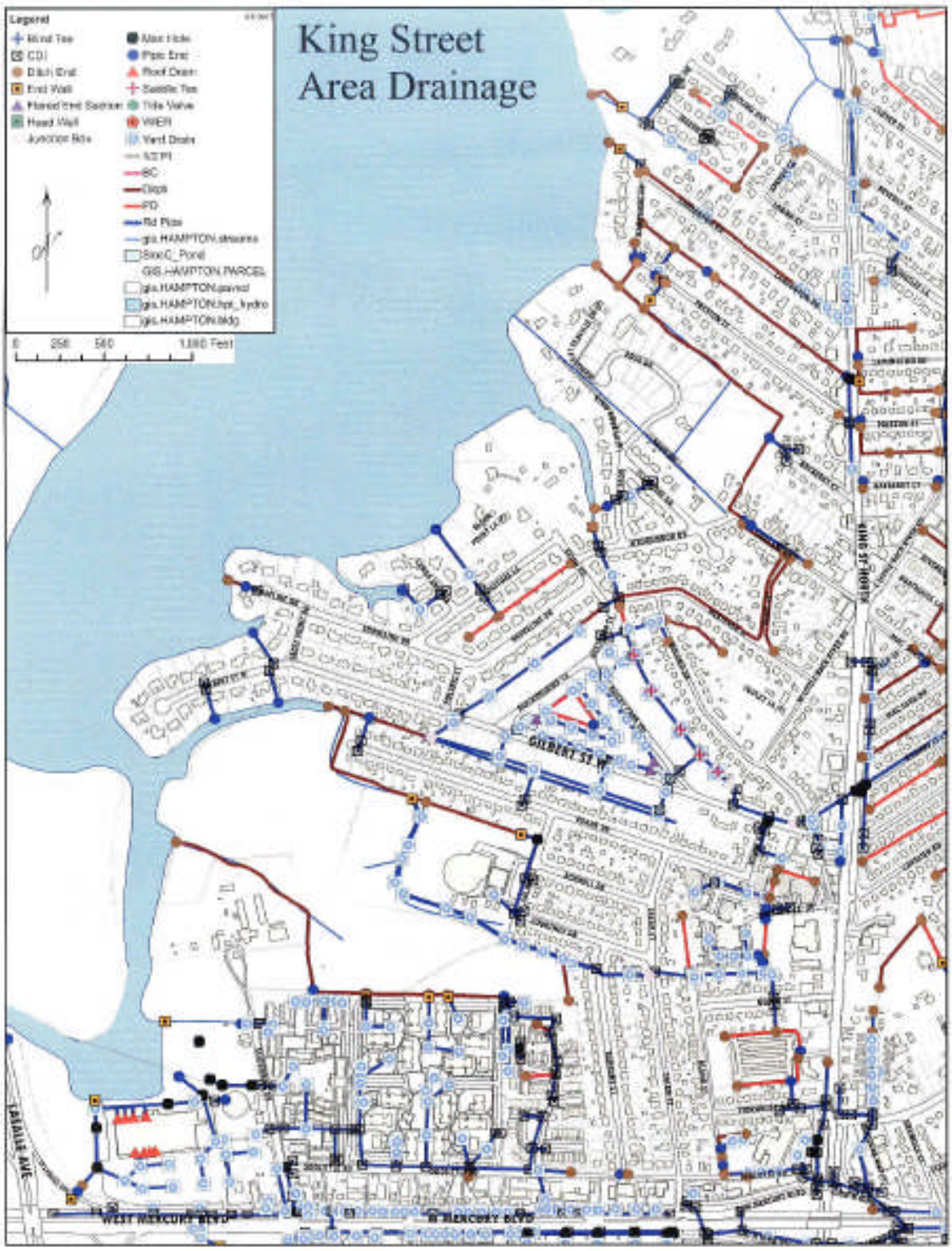


MAP 5.1.1 ◆ BONNEVILLE DRIVE AREA



MAP 5.1.2 ◆ OLD WYTHE AREA

MAP 5.1.3 ◆ KING STREET AREA DRAINAGE



Appendix C – Division FAQs

Drainage Maintenance ❖ Frequently Asked Questions

Is there a schedule for ditch cleaning?

Drainage Maintenance tries to clean the backyard ditches that street runoff water flows through twice a year (not all backyard ditches). Drainage street side ditches in neighborhoods are cleaned once a year, if needed. For information on the last cleaning(s), contact the 311 Customer Call Center between 7am and 11pm, daily. Name, address and telephone number must be provided. The information will need to be researched.

Are there any future plans for drainage work in my area?

Drainage Maintenance routinely cleans all neighborhood ditches (that street water runs through) twice per year. For more specific information about the maintenance schedule or larger scale efforts, contact the 311 Customer Call Center. Please provide name, address, telephone number and particular interests. You will be contacted by the Drainage Department.

What can I do about my neighbor dumping things in the ditch?

To report dumping in drainage ditches, contact the 311 Customer Call Center between 7am and 11pm, daily. Drainage Maintenance will clean the ditch if it is not a private ditch and speak to the resident responsible for the dumping and notify Codes Compliance if the property owner refuses to allow the city access. The caller's personal information will not be revealed.

Why is my street flooding?

In heavy rains, streets will flood. Our crews do everything possible to clear up problems as quickly as possible. To have the crew to check the location concern, contact the 311 Customer Call Center. An advocate will double-check to make sure our crews are already aware of the problem and get to it as soon as possible.

Can I dump water from my pool in the drainage ditch (street)?

As long as the water contains no odd chemicals from cleaning, and won't flood the system it is okay. If you are unsure of the pool water, contact the 311 Call Center. When calling from within the Hampton city limits, dial 3-1-1. When calling from outside of Hampton or from a cell phone, you must dial (757)727-8311.

Specific questions about bugs, spiders, bees, insects, and mosquitoes.

For information on bugs, spiders, bees, insects, and mosquitoes, contact the 311 Call Center between 7am and 11pm, daily. When calling from within the Hampton city limits, dial 3-1-1. When calling from outside of Hampton or from a cell phone, you must dial (757)727-8311.

I want to report a heavily littered area or littering going on (somewhere). Who can I call?

If the area is private property, it is the responsibility of the property owner to clean up excessive litter, which is a codes violation. You can contact 311 (dial 311 in Hampton or (757)727-8311 outside of Hampton or on a cellular phone) to report litter on private property.

If the area is public property, the city will take care of the problem. The Drainage Division of Public Works will take care of excessive litter in drainage ditches (one or two pieces of litter

would not be considered excessive). The Parks Department will take care of large amounts of litter at schools, beaches, outside city buildings or parks. You can contact 311 (dial 311 in Hampton or (757)727-8311 outside of Hampton or on a cellular phone) to report litter on public property.

You can also report public areas such as highways to the Clean City Commission's Litter Line at (757)727-6394.

Litter is a community problem and to promote good stewardship, Hampton Public Works started Hampton Watershed Restoration Project (with other partners) and an Adopt A Stream program to tackle shorelines. Volunteers have removed several hundred tons in the last decade. When private property is littered and volunteers are located to help, there's an expectation that the owner will participate and support the event. If the area is deemed hazardous or unsafe, volunteers will not be recruited.

Please make sure you have an address of the property and the type of material to be cleaned up.

Is there someone who can retrieve an animal from street drains/sewer lines?

The city's drainage department will come out and check the ditch and evaluate what needs to be done. Many times animals, such as cats, will come out on their own.

Why is it important to control the mosquito population in the City?

There are two main reasons we want to control the mosquito population. First to control the spread of mosquito transmitted diseases, and secondly so that we can participate in and enjoy outdoor activities during the Spring and Summer months.

Why doesn't the City do more to control mosquitoes?

The City works to keep the mosquito population in check and at a tolerable level. It would be cost prohibitive, would require massive manpower, and significant funding increases to totally control the mosquito population.

Where are the major breeding areas for mosquitoes?

Mosquitoes may be found breeding in salt marshes and low-lying areas that hold water after a rainfall. Some mosquitoes, such as the Asian Tiger mosquito, prefer to breed in artificial containers such as clogged rain gutters, poorly maintained bird baths and wading pools, buckets, tires, flower pots, and any other container that can collect and hold rain water. Mosquitoes can develop from an egg to an adult in as little as 5 to 7 days.

What type of mosquito is the major problem in Hampton?

The Asian Tiger mosquito. They rest in tall grass and shrubs, bite day or night, and lay eggs in containers that catch and hold water. They are best controlled by eliminating egg-laying sites in your own yard. Spray flights are not effective in controlling Asian Tigers.

What can I do to control the mosquito population in my yard?

You can eliminate areas of standing water such as clogged gutters on your house or shed, turn empty flower pots over so that they won't collect water, do not let water stand on tarps or plastic covers, change the water in bird baths each week, empty wading pools, throw away empty potted plant trays, and correctly dispose of used tires. All of these measures will help control the mosquito population.

Where can I get more information on mosquito control?

Public education is key to the success of any mosquito control program. You can visit a web site at www.mosquito.org for more information and mosquito control tips. Contact the 311 Customer Call Center by dialing 311 in Hampton or 757-727-8311 outside of Hampton or on a cellular phone for more information or if you are having a problem with mosquitoes in your yard.

What types of diseases can be transmitted by mosquitoes?

Eastern Equine Encephalitis, West Nile Virus, Saint Louis Encephalitis, and LaCrosse Encephalitis are mosquito transmitted diseases that may occur in this area.

How real is the threat of disease from mosquitoes?

With the mobile nature of our world the threat is very real. Mosquitoes can be transported around the globe within days. In Hampton we have the vectors and diseases at a low level as they have not yet become amplified. Environmental factors such as humidity, rainfall, temperature, and season can cause an infestation and increase the chances of a disease spreading.

West Nile Virus and Equine Encephalitis are both diseases related to mosquito bites.

Can my dog get any disease by being bitten by mosquitoes?

Yes they certainly can. The most common disease is dog heart worm. Heart worm prevention is easy, but treatment of the disease can be very expensive. Untreated heart worms can lead to the death of the dog.

Dogs and cats are also susceptible to West Nile Virus. Do not treat your dog or cat with repellants such as OFF or Cutter, these products can be dangerous if ingested. Consult your veterinarian for more information on products that can prevent these diseases.

What types of pests or flying insects are common in Hampton?

Numerous types of spiders, including the Black Widow, hornets, wasps, yellow jackets, snakes, flies, fleas, and ticks are all common in the City.

What should I do if I am bitten by a Black Widow spider?

You need to contact a physician or hospital immediately. Small children are especially vulnerable to the bite and need to be treated right away. While the bite is not considered life threatening, hospitalization may be necessary.

How will I know if I have been bitten by a Black Widow spider?

The bite may not be felt. It is followed by burning, local swelling, and redness. Two puncture points may be visible. The pain intensifies after 1-3 hours and may last up to 48 hours. The spider venom is neurotoxic and the pain usually progresses from the site of the bite up or down the arm or leg, finally localizing in the abdomen or back. The abdominal muscles may become rigid and board-like with severe cramps. Other symptoms may include nausea, profuse sweating, tremors, labored breathing and speech, and vomiting. The severity of the symptoms depends on the age and sensitivity of the victim, with small children most severely affected.

How can I control spiders in my house, garage, or shed?

Keep areas clean and free of debris. Eliminate their living sites by removing trash, old boxes, piles of lumber, and rubble from under or around houses or out-buildings. There are a variety of insecticides available for spider control. Please remember to carefully read and follow all label directions.

How can I help make sure that snakes will not want to live in my yard?

Simply eliminate the areas that they would want to live in. Keep vegetation cut low, do not keep piles of wood or brush on your property, and remove debris and trash or other items where they can hide.

How can I get rid of insects and pests like hornets, yellow jackets, wasps, or other stinging insects?

There are several products labeled and available for controlling insects and pests. Please carefully read and follow all label directions for their use. Always apply the product at night when the insect is "home". NEVER use gasoline, kerosene, oil, or any other flammable liquids to control pests due to the danger to you and the potential of groundwater contamination.

What can I do to get rid of or control ticks in my yard?

Usually ticks are a problem because a pet dog has carried them into the yard or house. Female ticks on the animal feed, drop-off, and lay eggs. The eggs hatch and thousands of larval ticks seek a meal, usually from the dog. Controlling ticks around the house means keeping the animal free of ticks with the use of a suitable dip, dust, spray, shampoo, and a tick collar. Dogs can be de-ticked by hand, but remember to protect your fingers or use tweezers.

You should also keep your law mowed and keep brush away from walkways.

What can I do to protect myself from tick bites?

Wear light colored clothing so ticks can be seen easier, wear long sleeved shirts and long pants in an area where ticks may be, and tuck pants into socks and shirttails into pants to force the tick to walk on the outside of clothing where it can be easily seen, and removed. You can also use repellents to help keep ticks away and you should check frequently for ticks on the body and clothing, especially on children.

What type of diseases can be transmitted from ticks to humans?

The most common tick-borne diseases in this area are Rocky Mountain Spotted Fever (RMSF) and Lyme Disease. RMSF is most often transmitted by the bite of the American dog tick and can be fatal if left untreated. Lyme Disease is transmitted through the bite of the deer tick. Untreated, Lyme Disease can cause permanent damage to joints and heart muscle. Both RMSF and Lyme Disease can be controlled with antibiotics.

What are muskrats and why are they a problem in Hampton?

Muskrats are fur-bearing animals, usually 18-24 inches in length, and can weigh between one and four pounds. They have a dark tan to reddish-brown to dark brown to black fur color on their sides and back. The belly is generally light gray to silver to tan. They live in any place where food and water are available year-round and they are primarily vegetarians. Muskrats cause damage to ditch banks with their burrowing and making of their den.

How can I prevent or minimize muskrat damage to my property?

Muskrats can cause damage to property when they burrow into the ditch banks as they make their den and by eating vegetation such as lawn grass, or garden and ornamental plants. A short (2-3 foot) chicken wire fence that is partially buried in the ground can be effective in keeping muskrats out of your yard or garden. The City of Hampton does not trap muskrats.

You can contact a private exterminator for more information or if you need help in dealing with the problem.

What is the telephone number for the Virginia Department of Fish and Wildlife?

The telephone number is 1-804-367-1000.

What kind of rats are normally found in Hampton?

The most common type is the Norway rat. They are usually 7-10 inches long, not including their tail, have blunt noses, small ears and eyes, and a hairless tail that is shorter than their body.

Where do these rats live?

They build their nests by digging holes around foundations of buildings, in stream banks, and under piles of wood and trash. They can fit through an opening as small as one-half inch and can chew through many types of building materials.

If I don't see any rats in my neighborhood does that mean there aren't any?

Not necessarily. Rats are most active at night and will only travel about 100 feet from their nest to find food and water. They like to live close to their food source and may become accustomed to eating one type of food over any other. They especially like fresh food to eat, but will thrive on pet waste.

How can I tell if there have been rats in my yard?

When a rat leaves its nest it travels the same path each time called a runway. Outdoors, the runway may appear as a trail in the grass or dirt. Indoors, the runway may show "rub marks" where oil and dirt from the fur has been left on walls or floors. Also, noises, droppings, tracks, gnaw marks, pieces of fur, and burrows are signs of rat activity.

What kinds of diseases can be carried by rats?

Rats commonly live near people and are not afraid of the odor of humans. They can transmit many diseases to people including leptospirosis, salmonella, trichinosis, and rat-bite fever. The fleas on rats can carry murine typhus or plague. Rats are not known to transmit rabies.

How can I get rid of or control rats in my yard?

This four step program to eliminate rodents can be effective in getting rid of rats. First, prevent rats from entering your home by repairing openings with a material such as sheet metal or hardware cloth. Next, remove any sources of food for rats by storing food, especially pet food, in tightly sealed containers; place all garbage in an undamaged container with a lid; remove any uneaten pet food after feeding your animals; and remove all pet droppings from your yard everyday. Third, remove all hiding places for rats such as piles of trash and garbage; objects stored outside, such as fire wood, should be 12-18 inches off the ground to prevent burrowing; and cut grass and brush to remove cover for rats and discourage their activity. Finally, eliminate rats with traps placed in the runway for best results. Peanut butter, hot dogs, or bacon makes a good rat bait. When using a rat poison it must be placed where it cannot be reached by children, pets, or any animals other than rats or mice. Always carefully read and follow all label directions on any rat bait or poison purchased.

Does the City of Hampton bait for rats?

Yes, we bait for rats on public property, in areas like storm drains and ditches, in some park locations, and in City right of ways where it has been determined that a problem exists. The City does not do any baiting on private property nor do we supply or sell rodent bait to citizens.

Does the City spray larvicides for mosquitoes?

Yes, there is an ongoing program to kill immature mosquitoes before they become adults and begin breeding.

If you are having a problem with lots of mosquitoes, call the 311 Call Center between 7am and 11pm, daily. Someone will come out to evaluate the number and type of mosquitoes in an area and whether spraying would be effective or is necessary at that time.

To reach the Call Center:

When calling from within the Hampton city limits, dial 3-1-1. When calling from outside of Hampton or from a cell phone, you must dial 757-727-8311.

When does the larvicide program take place?

The applications begin in early Spring when larvae first appear and continue throughout the Summer and early Fall. The City bases their decision on when and where to spray, according to the number of complaints from residents, the weather and surveys of mosquito counts in areas of the City.

If you are having problems with a large number of mosquitoes in your area, contact the 311 Customer Call Center. When calling from within the Hampton city limits, dial 3-1-1. When calling from outside of Hampton or from a cell phone, you must dial 757-727-8311.

Why does the City want to control the immature mosquitoes?

It is much more cost effective to control immature mosquitoes (larvae) than to try and control the adults since the larvae must remain in water during growth and development. A breeding site may contain many thousands of mosquito larvae in a relatively small area. It is cheaper to apply a larvicide to a small area of water to control the mosquito larvae than to spray a large part of the City to control adult mosquitoes that can fly.

What type of larvicide is used in the program?

A variety of products are used today to control mosquito larvae. They include surface oils, insect growth regulators, naturally occurring bacteria, fish, nematodes (small worms that are parasites of larvae), and various other chemical agents. The choice of which larvicide to use will depend on a number of factors including the type and size of the habitat in which the larvae are found, the species of mosquito, availability of mosquito control personnel, and the type of application equipment on hand.

Are the spray flights the same as the larvicide program?

No. Aerial spray flights are only effective in controlling adult mosquitoes that are flying at the time of the application.

Do the spray flights kill all of the adult mosquitoes?

Spray flights kill only the mosquitoes that are actively flying at the time of the application. Mosquitoes resting in vegetation, in the water, inside buildings, or other structures will not be affected by the spray. The spray application has no long lasting (residual) effect.

Is the spray used in the spray flight program safe for people and pets?

All of the products used in the mosquito control program are registered for such use by the United States Environmental Protection Agency and are safe for use around humans and pets. Anyone who has asthma or chronic lung disease, or is sensitive to insecticides, should stay indoors while mosquito-spraying operations are going on. Bee keepers are advised to keep their hives covered during the time of spray operations. Notify Public Works Entomology of a hive so

that you can be notified 24 hours prior to aerial spraying. Contact the 311 Customer Call Center by dialing 311 in Hampton or 727-8311 outside of Hampton or on a cellular phone.

Who is responsible for cleaning the big ditches in my neighborhood?

If the ditches are part of the public drainage system the city will clean them once a year, or as needed when debris blocks them.

Contact the 311 Customer Call Center by dialing 311 or 727-8311 to request that a ditch be cleaned.

Who cleans the ditch that runs in front of my house along the street?

The front ditch is also cleaned once a year by City drainage crews and large debris is removed when needed to keep them open. The City's Parks Department is responsible for grass cutting and litter removal from the front ditches in the City (grass cutting is ONLY for the side of the ditch next to the street - the side next to the resident's yard is the resident's responsibility).

To request that a ditch be cleaned or grass be cut/litter removed, contact the 311 Customer Call Center by dialing 311 or 727-8311.

Who is responsible for maintaining (cut the grass or trees or clean) the ditches that run along side of houses or behind them?

The City will only maintain these side or back ditches if they collect and move "street water" (water from the street area that drains into them).

If you have a question about the ditch, contact the 311 Customer Call Center by dialing 311 or 757-727-8311. A Customer Advocate is available to answer your questions or take your service requests 7 days a week.

Who cleans ditches on private property?

Those ditches are the responsibility of the individual property owner to clean and maintain as needed.

Can I rake my leaves into the front, side, or back ditch in the fall?

No. Raking leaves into the ditches or curb drop inlets (CDI's) in the street is a major cause of flooding during rain storms. Blocked ditches will cause flooding that can threaten your home and property. Put your leaves in clear plastic bags and at the curb for collection with your other solid waste.

What are retention ponds and how do they work in the drainage system?

Retention ponds act as a storage facility for excess storm water in the system. They fill and drain naturally and are a more recent addition to our drainage system.

Who has the responsibility for cleaning these retention ponds?

The City owns several retention and detention ponds (including the ones at Teach Street and Buckroe Avenue at Old Buckroe Road) and is responsible for their cleaning and maintenance. Many other retention ponds are the responsibility of the neighborhood association to clean and maintain. If you are not sure which is a public or private pond call 311 (or 727-8311) and they will send a request to the Drainage Division to investigate the pond.

Why can't I dump trash, chemicals, oil, or other things in drainage ditches?

Not only is it illegal, but these ditches and CDI's drain directly into the Chesapeake Bay, so

dumping affects the entire region. Trash and debris in ditches can lead to flooding in times of heavy rain. Please dispose of all chemicals, oil, trash, debris and garbage through the proper collection programs.

What are CDI's and how do they fit into the drainage system?

Curb drop inlets (CDI's) are the openings in the curb and gutter that take street water and connect to drainage pipes under the ground. These pipes lead to the large ditches which empty into our creeks, rivers, and the Chesapeake Bay.

Who takes care of cleaning leaves and debris out of, or repairing the CDI's and yard drains?

Drainage crews for the City inspect, repair, and clean the CDI's and yard drains as needed to make sure they are free flowing to accept storm water.

How can these CDI's and yard drains get blocked up and not flow properly?

Trash, litter, and debris left or thrown in the street will flow to the yard drain or CDI and can block it up. Leaves and grass that are swept or raked into them is the major reason they block up and flood.

What happens when the CDI or yard drain is blocked and cannot flow properly?

These drains are the first part of the system to take storm water runoff. If they are blocked with leaves, grass, trash, or debris, flooding begins immediately and can cause serious damage to homes and property.

What if I find a broken CDI frame or top of a yard drain with a missing or broken grate?

Contact the 311 Customer Call Center to report damages. When calling from within the Hampton city limits, dial 3-1-1. When calling from outside of Hampton or from a cell phone, you must dial 757-727-8311. The Center is open from 7am until 11pm daily.

What causes a cave-in in the drainage system?

A cave-in can be caused by failure of a joint in the pipe or damage to the pipe itself. Either way, it needs to be repaired as soon as possible to prevent further damage to the system.

Are all cave-ins part of the drainage system?

Cave-ins can occur in the storm water and wastewater systems. Normally, a cave-in in the street is over a wastewater line and cave-ins near the curb or in areas near your yard are over a storm water line.

How would I know which type of cave-in to report to the City?

Report either type of cave-in (drainage or waste water) to the City right away. We will determine which type of line it is and take the necessary repair action.

Who is responsible for fixing a cave-in that occurs in a privately owned storm drain system?

Private storm drain systems such as townhouses, condominium communities, and shopping centers are repaired and maintained by the property owner, not the City. To determine responsibility, the Storm Water Division will investigate the situation.

What will happen if a cave-in is not reported or repaired?

Cave-ins left unrepaired will only make them worse and can cause further damage to the system and the ground above them. If bad enough, a major cave-in can be dangerous to the public, especially children.

Do cave-ins happen only over the drainage pipes?

Cave-ins can occur over drainage pipes, sewer lines, manholes, catch basins, CDIs, and head walls around pipes.

How soon can I expect a drainage cave-in to be repaired?

The City responds to a call for a cave-in normally the same day it is reported to assess the damage. Cave-ins in the roadway take priority for repair, but all cave-ins in the drainage system are usually repaired within 4 to 6 weeks if possible.

What can be done about illegal dumping in the ditches and other drainage areas?

For illegal dumping in progress, report the violation to Police Communications at 757-727-6111. Please provide a description of the individual(s), description of the vehicle involved, or a license tag number if possible. Location and time of the incident are also very helpful in catching illegal dumping in progress.

If it is not in progress, contact the 311 Customer Call Center by dialing 311 or 727-8311.

What makes up an illegal dumping violation?

Hampton has a collection system for garbage, trash, bulk trash, tires, limbs, brush, and household chemicals. Any item(s) that are dumped illegally in our ditches, beaches, roads, sidewalks, wooded areas, or vacant lots constitutes illegal dumping.

What can happen if someone is convicted of illegal dumping?

It is a Class 1 misdemeanor punishable with a fine of up to $2,500 per offense.

Why is illegal dumping a problem in the City?

Besides being against the law, illegal dumping blocks our storm water system or the materials get directly into the Chesapeake Bay and affect the entire region. Also, it simply makes Hampton look bad to our citizens and visitors.

Who is responsible for cleaning up an illegal dump site (public property) that no one was caught dumping at?

Drainage crews will remove large items from public property such as furniture, tires, shopping carts, and other big items that block the ditches and can cause flooding problems.

The Hampton Parks Department is responsible for litter collection on public property and at the schools.

On private property, the owner is responsible for clean up. Failure to do so could result in a Codes citation.

To report a dump site that is on public property (that no one was caught dumping at), contact the 311 Call Center between 7am and 11pm, daily. When calling from within the Hampton city limits, dial 3-1-1. When calling from outside of Hampton or from a cell phone, you must dial 757-727-8311.

Who would pay for a clean-up of chemicals or oil that was illegally dumped?

The responsible party, if caught, would be billed for the clean-up and the costs for the process is very expensive, not to mention court costs. If a spill is on private property, the owner can be billed for the cost of the clean-up, even if another party spilled or dumped the chemicals.

If our drainage system is maintained, and in good working condition, why does it flood in Hampton?

The drainage system is designed to handle normal amounts of rainfall during the year. Torrential rains, hurricanes, or northeasters are going to cause minor to major problem depending on the severity of the storm. Also, remember that our city is relatively flat so drainage is a problem under abnormal conditions.

If my neighborhood floods, can I assume it is from a blockage in the drainage system?

Neighborhood flooding is not always an indication of a blockage in the drainage system. Heavy rains are going to cause some flooding. We ask that you be patient and let the flooding subside and drain normally. A major storm such as Hurricane Floyd was an example of when Newmarket Creek could not handle the water volume coming to it, so major flooding occurred.

What do drainage crews do to prepare for heavy rains if they are forecast?

Drainage personnel have the City divided into 6 sections which are monitored by teams running routes to check for known problem areas. When heavy rain is forecast, these routes are run prior to the storm's arrival. Also, during a heavy rain storm or hurricane the crews are either "on-call" or working 24 hours a day to handle any emergency flooding problems.

Is there anything that can be done to stop flooding and stoppages in the drainage system?

The City is continually looking at ways to improve the drainage system. Costs are very high, there are property issues to deal with, and none of us wants to pay higher taxes in order to fund improvements unless we are directly affected by flooding. Constant maintenance of the system is the most cost effective way to insure major problems are avoided as much as possible.

How does the City prioritize their response to a flooding or stoppage call?

Main roads take priority in a situation of flooding. Arterial streets are then checked followed by residential neighborhoods. Backyard flooding is checked as soon as possible, but is lowest priority.

What if the yard drain is in my backyard or an area that has been fenced off in the easement?

Make sure the yard drain is free of debris before the rain begins. Please remember that the drainage crews cannot trespass on private property to open or clean the yard drains without the property owner’s permission.

Who handles flooding and stoppages on private property and shopping centers?

The individual private property owner is responsible for any flooding or stoppages on their own property.

My neighbor has no driveway but has put two blocks of wood and a sheet of plywood on the curb to drive onto his property. It's causing the gutters to flood when it rains. What can the city do?

If it is causing a drainage problem, we can send someone out from the City's Drainage Division come out to look at the situation and talk to the resident. It is not a Codes Compliance issue.

There's something funny or strange at the pump station with a sign near it saying to contact 311. What is it?

It may be a Gravid Trap, which tests for West Nile Virus and Eastern Equine Encephalitis. The traps go in water, such as in someone's backyard in a bucket or some other shallow water area, such as a pump station. The traps look a little funny but are effective in gauging the presence of these diseases.

Does the city sell or give away dirt?

The city will give away dirt if they have dirt as a result of doing work, such as when they are excavating a ditch. They don't take advance orders for the dirt and will not travel to deliver it (must be doing work on your street/neighborhood). Residents generally approach the work crews and ask for it.

To deliver the dirt, there must be no overhead power lines in the way and it cannot be a low lying area or wetlands area.

Aerial Mosquito Spraying

Mosquito aerial spraying at Langley and parts of the surrounding area is scheduled for August 29 through 31. The flights are scheduled to take place from 7:00 to 10:00 a.m. each day.

Spraying areas include Langley, Bethel Manor housing, Hampton, and Fort Eustis. A C-130 Hercules will be flying as low as 150 feet over the peninsula to train aircrew and spray Dibrom Concentrate. After spraying, about 90 percent of adult mosquitoes should be killed. The reduction in mosquito populations may last up to two weeks depending on the size of the area sprayed and how many new mosquitoes hatch.

Beekeepers are asked to cover or keep their bees inside. Anybody with known allergic reactions should stay indoors. The mosquito hotline number, 764-1104, will be available 7 a.m. to 8 p.m. August 28 through 31 for up-to-date spraying information.

Aerial Spraying for Mosquitoes

Mosquito aerial spraying at Langley and parts of the surrounding area is scheduled for September 25 through 30.

The flights are scheduled to take place from 4:30 to 7:30 p.m. each day.

Spraying areas include Langley, Bethel Manor housing, Hampton, Fort Monroe, Fort Eustis, Craney Island, Portsmouth and the Naval Weapons Station.

A C-130 Hercules will be flying as low as 150 feet over the peninsula to train aircrew and spray Dibrom Concentrate. After spraying, about 90 percent of adult mosquitoes should be killed. The reduction in mosquito populations may last up to two weeks depending on the size of the area sprayed and how many new mosquitoes hatch.

Beekeepers are asked to cover or keep their bees inside. Anybody with known allergic reactions should stay indoors.

How can I find out if the house I am buying has had any flooding problems?

Contact the 311 Customer Call Center by dialing 311 or 757-727-8311. They can tell you if there have been any flooding requests previously from that address or if not, request that someone from the Stormwater (Drainage) Division contact you regarding any flooding issues on the street you are considering a purchase.

Index

L

M

N

O

P

Q

R

S

T

U

W

Z